THE REVOLUTION WILL BE COMMERCIALIZED: FINANCE, PUBLIC POLICY, AND THE CONSTRUCTION OF INTERNET ADVERTISING

BY

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DISSERTATION

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Abstract

This dissertation traces the internet's assimilation into the marketing system during the 1990s. It analyzes the construction of the online advertising industry and clarifies its role in the reconfiguration of commercial media. The conceptual framework is that of critical political economy. Archival sources, government documents, and trade press accounts provide a foundation for an assessment of how online advertising evolved in relation to a changing capitalist political economy.

The "dotcom" period was characterized by broad market liberalization, a technology investment bubble, and accelerating disruption of established media business models. In this context advertising and media firms, major marketers, and a group of newly formed online advertising companies sought to fashion the world wide web into a marketing platform and secure their own position at the heart of the internet's nascent media economy. Deeply integrated into speculative financial markets, these actors appropriated key digital technologies and influenced public policy in order to steer the development of the web toward a model of advertising based on pervasive and surreptitious consumer surveillance. This confluence of factors rapidly broadened the scale and scope of online advertising, altered the technical character and everyday experience of the web, and established a framework for the continued transformation of advertising and media in the 21st century.

This research situates online advertising's development as an ongoing and contested process rooted in historical social relations. It emphasizes the interconnected roles of finance, technology, and politics in shaping the internet's evolution and delimiting the boundaries of its acceptable use. At the same time, it sheds light on the dynamic nature of capitalism by charting

its interaction with a powerful new interactive medium that was and remains simultaneously disruptive and catalytic.

Table of Contents

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Introduction

Advertising, Media, and Political Economy

This dissertation chronicles the construction of advertising on the internet and the world wide web in particular. The title alludes to Gil Scott-Heron's famous poem, "The Revolution Will Not Be Televised," which became associated with the United States protest movements of the 1960s and 70s. Full of references to popular advertising campaigns of the period, the poem carries the message that social change of a genuine character will not be embraced or advanced by a commercial media system; marketers do not generally sponsor revolutions. This project seeks to explain how the "digital revolution" of the 1990s came in fact to be heavily sponsored in its nascent stages and analyzes the implications of this transformation for the character of the internet and the arrangement of media in society more broadly.

The conceptual framework is that of critical political economy, which situates the development of online advertising in relation to the commercial media system and capitalist economy at large. Today, marketers spend more money on internet advertising than any other medium outside of television, but in the early years of the web's emergence there was no certainty that it would function as a marketing platform.[1] Although some recognized it more quickly than others, the web presented an existential challenge for marketers dependent upon commercial media to "connect consumer goods and services with potential markets, and indeed to bring those markets into being."[2] Annexing the web into the marketing system became an overriding shared imperative among advertising and media firms, the major marketers that employ their services, and a group of newly formed online advertising companies that sought to secure their own position at the heart of the internet's growing media economy.

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[1] Interactive Advertising Bureau, *2011 IAB Internet Advertising Revenue Report* (April 2012), 19.
[2] John Sinclair, *Advertising, the Media and Globalisation* (New York: Routledge, 2012), 2.

The internet was the first new communications medium of broad social significance to arise since television in the post-war era. The world wide web, created as a research tool and released into the public domain to encourage its diffusion as a "universal medium for sharing information," became the internet's popular interface in the 1990s.[3] Support for advertising was not a standard feature of this technology; a capacity for marketing had to be constructed. As Dan Schiller argues, "the sponsor system would have to labor to claim the heart and soul of this emergent medium. A whole institutional infrastructure had to be brought into being in a concerted attempt to develop the web's selling capabilities."[4]

Between 1995 and 2000, leading companies from the marketing and media sectors – herein collectively referred to as the *marketing complex* – worked to transform the web from an outpost on the fringes of business to an essential component of modern advertising.[5] The struggles among these actors over the particulars of the internet's commercialization not only shaped the development of the new online media, but catalyzed major changes in the structure of the marketing complex at large. The internet functioned as an accelerant to a set of tensions that had been smoldering within the marketing complex for decades. Problems of audience fragmentation and interactive media convergence amounted to a loss of control for marketers over a changing media system that had long been dictated by their interests.[6] By the 1990s, media business relations were shifting at an increasingly rapid pace. In 1965, a marketer could

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[3] Tim Berners-Lee and Mark Fischetti, *Weaving the Web: The Original Design and Ultimate Destiny of the World Wide Web by its Inventor* (New York: HarperBusiness, 2000), 84; CERN Press Office, "CERN celebrates Web anniversary," April 29, 2003, http://press.web.cern.ch/press-releases/2003/04/cern-celebrates-web-anniversary

[4] Dan Schiller, *Digital Capitalism: Networking the Global Market System* (Cambridge: MIT Press, 1999), 118.

[5] The marketing complex concept is adapted from Sinclair's notion of the manufacturing/marketing/media complex. Government entities and consuming publics (audiences) are vital components of the marketing complex as well, but they wield considerably less power when it comes to structuring media system development. Sinclair, *Advertising, the Media and Globalisation.*

[6] Matthew McAllister, *The Commercialization of American Culture: New Advertising, Control, and Democracy* (Thousand Oaks, CA: Sage, 1996).

reach 80% of 18- to 49-year-old women by purchasing three television commercials; three decades later it required nearly 100 prime-time spots to achieve the same result.[7]

The internet was at the center of these changes, seemingly giving consumers ever greater autonomy regarding their media experiences, including enhanced capabilities to excise commercial messages altogether. As the web became more popular, the marketing complex began to perceive it as genuine threat, but also as a new frontier for growth. Through much trial and error, greater personalization of advertising was positioned as a solution for making marketing work on the web and reigning in the chaos wrought by interactive media. Newly created online advertising companies such as DoubleClick developed novel ways to appropriate the web's technical affordances in order to deliver targeted ad messages and collect marketing information via new methods of consumer profiling. Surveillance-based ad targeting and an attendant business model built around the concept of infrastructure provision (addressed below) became the keystones around which online advertising was constructed.

Like many revolutionary technologies, the internet's popularization and commercial development were deeply integrated with financial markets.[8] In the late 1990s, a speculative bubble formed around internet technology investment that funneled huge sums of capital into the nascent online advertising industry, catalyzing its rapid growth. Public policy played a fundamental role as well. Alarmed at the rapidly advancing scale and scope of internet data collection, privacy advocates pressured legislators and regulators to enact policies to govern the collection and use of online consumer information. Increasingly dependent upon data collection,

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[7] Raju Narisetti, "New and Improved: Ad experts talk about how their business will be transformed by technology, *Wall Street Journal*, November 16, 1998.
[8] Carlota Perez, *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages* (Northampton, MA: Edward Elgar, 2002).

the marketing complex formed lobbying and public relations coalitions to halt these regulatory efforts.

Ultimately, the construction of internet advertising was grounded in the common need among all businesses to grow and impelled by broader changes in the global capitalist economy. More specifically, it was implicated in a reconfiguration of production, finance, and consumption that had been underway since business began a sustained push to develop and appropriate information and communication technologies (ICTs) in the 1970s.[9] So, while this dissertation is principally about the construction of online advertising, it is also about the dynamism of a capitalist economic system that increasingly takes up both marketing and finance as sites of expansion. To be clear, my argument is not that the internet – past or present – has been fully dominated by commercial interests. To a much greater extent than established mass media or proprietary computer networks, the internet has facilitated a range of activity that is unbridled by the discipline of economic rationality. Unlike cable television or Microsoft's Xbox Live gaming and entertainment network, there is a vast non-commercial web. Likewise, the affordances of digital technology and networked communication more broadly have been disruptive to many media business models, especially those primarily based on the creation of artificial scarcity. Even today, the state of internet advertising is far from a business utopia.

Nevertheless, a critical mass of internet activity is supported by advertising business models. Seven to nine of the top ten most visited web destinations in the US commonly generate a majority of their revenues through advertising.[10] The percentage of total US advertising expenditures allocated to online channels has significantly increased nearly every year since data has been available, outpacing the growth of both cable and broadcast television during each of

[9] Dan Schiller, *How to Think about Information* (Urbana: University of Illinois Press, 2007); Herbert I. Schiller, *Information and the Crisis Economy* (New York: Oxford University Press, 1984).
[10] Alexa, "Top Sites in the United States," http://www.alexa.com/topsites/countries/US

their first 16 years of measurement.[11] The third quarter of 2012, the latest period for which data is available, was the biggest quarter on record for online ad spending.[12] Already among the top advertising channels, some analysts predict that the internet will unseat television as the largest ad medium by 2016.[13] Though many billions of ads are served on the web every day, it is not merely a delivery platform. The web has also become a massive engine of marketing research conducted via pervasive and surreptitious consumer surveillance. As this dissertation shows, the foundational "surveillance infrastructure" upon which modern consumer profiling practices depend was forged in the dotcom era. Already by the year 2000, profiling web users for advertising purposes was effectively ubiquitous.[14]

This project engages an interdisciplinary body of scholarship that broadly analyzes the social significance of the internet. Some of the most influential work in this area such as Yochai Benkler's *Wealth of Networks*, Henry Jenkins' *Convergence Culture*, and Lee Rainie and Barry Wellman's *Networked* provide important insights regarding new forms of cooperative production and cultural participation engendered by interactive media.[15] The internet's capacity for individual and collective empowerment is a vital area of research, yet this approach must be accompanied by perspectives that address the ways in which the web's participatory canvas has been shaped by its development within differential relations of power and the commercial media system in particular. We might delineate research that examines issues such as race, labor,

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[11] Interactive Advertising Bureau, *2010 IAB Internet Advertising Revenue Report* (April 2011), 21.
[12] Interactive Advertising Bureau, "Internet Advertising Revenues Hit Historic High in Q3 2012 at Nearly $9.3 Billion," December 19, 2012, http://www.iab.net/about_the_iab/recent_press_releases/press_release_archive/press_release/pr-121912
[13] Robert Hof, "Online Ad Spend to Overtake TV by 2016," *Forbes*, August 26, 2011, http://www.forbes.com/sites/roberthof/2011/08/26/online-ad-spend-to-overtake-tv/
[14] Federal Trade Commission, *Online Profiling: A Report to Congress* (June 2000), 6.
[15] Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven: Yale University Press, 2006); Henry Jenkins, *Convergence Culture: Where Old and New Media Collide* (New York: New York University Press, 2006). Lee Rainie and Barry Wellman, *Networked: The New Social Operating System* (Cambridge: MIT Press, 2012).

ideology, political engagement, and cultural production from this perspective as *critical internet studies.*[16] This project draws most heavily from elements within the critical internet studies literature that place the internet's relation to capitalism at the forefront of analysis. The framework of *political economy of media* focuses on the power dynamics through which market structures, technologies, public policies, and media systems are mutually constituted in society.[17] This perspective foregrounds the historical development of marketing and media as essential and integrated components of capitalism. Applied here, the question is not simply how marketing affects the internet, but rather to what extent has the internet been incorporated into the larger commercial media system of which marketing is the driving force?

In the tradition of C. Wright Mills, this approach recognizes that increasingly centralized instrumental power is often exercised in relation to overarching structural pressures and limits, whereby the activities of disparate actors are coordinated (with relative autonomy) by the systemic needs of those at the top of social hierarchies.[18] Along these lines, scholars such as Michael Dawson have theorized marketing as a form of "class struggle from above," a system

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[16] Lisa Nakamura, *Digitizing Race: Visual Cultures of the Internet* (Minneapolis: University of Minnesota Press, 2008); Trebor Scholz, ed., *Digital Labor: The Internet as Playground and Factory* (New York: Routledge, 2013); Thomas Streeter *The Net Effect: Romanticism, Capitalism, and the Internet* (New York: New York University Press, 2011); Zizi Papacharissi, *A Private Sphere: Democracy in a Digital Age* (Cambridge: Polity Press, 2010); Evgeny Morozov, *The Net Delusion: The Dark Side of Internet Freedom* (New York: PublicAffairs, 2011); Rebecca MacKinnon, *Consent of the Networked: The Worldwide Struggle For Internet Freedom* (New York: Basic Books, 2012); Lawrence Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity* (New York: Penguin, 2004); Tarleton Gillespie, *Wired Shut: Copyright and the Shape of Digital Culture* (Cambridge: MIT Press, 2007). For another formulation of "critical internet studies" as defined by Marxian analysis and a common "commitment to the struggle for emancipation, critique of positivistic Internet studies and instrumental rationality, and critique of domination," see Christian Fuchs, Nick Dyer-Witheford and Mark Andrejevic, "The State of Critical Internet Studies" (paper presented at the annual meeting of the International Association for Media and Communication Research, Istanbul, Turkey, 2011).

[17] Vincent Mosco, *The Political Economy of Communication: Rethinking and Renewal* (Thousand Oaks, CA: Sage, 1996); Robert W. McChesney, *Communication Revolution: Critical Junctures and the Future of Media* (New York: New Press, 2007); Vincent Mosco and Janet Wasko, eds., *The Political Economy of Information* (Madison: The University of Wisconsin Press, 1988; Nicholas Garnham and Fred Inglis, *Capitalism and Communication: Global Culture and the Economics of Information* (London: Sage, 1990).

[18] C. Wright Mills, *The Power Elite* (New York: Oxford University Press, 1956); Vincent Mosco, *Pushbutton Fantasies: Critical Perspectives on Videotex and Information Technology* (Norwood, NJ: Ablex, 1982).

for mobilizing the consumption of many for the benefit of a relative few.[19] Taking up both instrumental and structural power, this dissertation demonstrates how distinct entities within the marketing complex came together to construct an advertising-supported internet; to fashion it into a new tool for selling. Smaller rivalries aside, a broad range of companies maintained a common interest in bringing advertising to as many areas of social life as possible and sought to redefine the potentialities of the internet medium accordingly. Crucially, these efforts were motivated by real and perceived crises throughout the marketing complex status quo. In other words, they were conditioned at the structural level by the dynamism that characterizes capitalist economies. Political economy shows that this is a well-worn pattern in media and marketing development.

The "modern" form of national advertising progressed in relation to major political economic changes in the early 20th century.[20] Advertising through commercial mass media and the broader business discipline of marketing were forged to rationalize the creation of demand within an increasingly productive and centralized corporate capitalism.[21] A rich literature of critical media history chronicles these developments, unearthing the contested processes whereby marketing imperatives came to dominate the structure and content of successive media systems and highlighting attendant social problems such as the degradation of journalism, persistent class bias of media fare, and broadening of commercialism throughout society.[22] From

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[19] Michael Dawson, *The Consumer Trap: Big Business Marketing in American Life* (Urbana: University of Illinois Press, 2003).
[20] Daniel Pope, *The Making of Modern Advertising* (New York: Basic Books, 1983)*;* Richard M. Ohmann, *Selling Culture: Magazines, Markets, and Class at the Turn of the Century* (New York: Verso, 1996).
[21] Michael Dawson, *The Consumer Trap: Big Business Marketing in American Life* (Urbana: University of Illinois Press, 2003); Paul A. Baran and Paul M. Sweezy, *Monopoly Capital: An Essay on the American Economic and Social Order* (New York: Monthly Review Press, 1966). Historians also argue that mass advertising was a strategy developed by manufacturers to gain mercantile advantage over wholesalers and retailers. See Daniel Pope, *The Making of Modern Advertising* (New York: Basic Books, 1983.
[22] James Rorty, *Our Master's Voice* (New York: John Day, 1934); Gerald Baldasty, *Commercialization of News in the Nineteenth Century* (Madison: University of Wisconsin Press, 1992); Janet Wasko, *How Hollywood Works*

this perspective, the history of commercial media development is fundamentally intertwined with the history of creating markets for consumer goods and services. The shared lineage of media, marketing, and consumer culture is the starting point for critical analysis of online advertising.

Advertising strategy was fairly straightforward in its earliest formations. Mass produced goods in the same product category were often more or less equivalents, so advertising was employed to create product differentiation, or what Thorstein Veblen called the "production of saleable appearances."[23] Over time the tone of advertisements shifted from the descriptive nature of early print ads to the more abstract character of brand marketing, but the core component of mass media advertising was its reach. The advertising industry developed tactics such as manufacturing social dilemmas to be solved by buying products. Without discounting the systemic discrimination that was built into consumer culture from the start, many of these appeals can still be understood as largely generic.[24] "Chronic halitosis" was constructed as everyone's potential embarrassment. Beginning with turn of the century large circulation newspapers and magazines and intensifying during the network television era, "scale was

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(Thousand Oaks, CA: Sage, 2003); Roland Marchand, *Advertising and the American Dream* (Berkeley: University of California Press, 1985); Robert W. McChesney, *Telecommunications, Mass Media, and Democracy: The Battle for the Control of U.S. Broadcasting, 1928-1935*, (New York: Oxford University Press, 1993); Erik Barnouw, *The Sponsor* (New York: Oxford University Press, 1978); William Boddy, *Fifties Television: The Industry and its Critics* (Urbana: University of Illinois Press, 1990); Herbert I. Schiller, *Mass Communications and American Empire* (1969; repr., Boulder, CO: Westview Press, 1992); Susan Strasser, *Satisfaction Guaranteed: The Making of the American Mass Market* (New York: Pantheon, 1989); Inger L. Stole, *Advertising on Trial: Consumer Activism and Corporate Public Relations*, (Urbana IL: University of Illinois Press, 2006); Stuart Ewen, *Captains of Consciousness: The Politics of Style in Contemporary America* (New York: Basic Books, 1988); Stuart Ewen, *PR!: A Social History of Spin* (New York: Basic Books, 1996); Robert W. McChesney, *Rich Media, Poor Democracy: Communication Politics in Dubious Times* (New York: New Press, 2000); Ben Bagdikian, *The New Media Monopoly* (Boston: Beacon Press, 2004); Edward Herman and Noam Chomsky, *Manufacturing Consent*: *The Political Economy of the Mass Media* (New York: Pantheon, 1988).

[23] Thorstein Veblen, *Absentee Ownership and Business Enterprise in Recent Times: The Case of America* (New York: Augustus M. Kelley, 1964/1923), 309.

[24] Eileen R. Meehan and Ellen Riordan, eds., *Sex & Money: Feminism and Political Economy in the Media* (Minneapolis: University of Minnesota Press, 2002).

king."[25] Audience segmentation entered into the picture somewhat with commercial radio and specialty market magazines, but only according to rough estimations of consumer demographics.

The 20th century commercial media system coalesced around the task of building national markets and as these markets centralized, advertising became a cornerstone of corporate strategy. In increasingly prevalent oligopoly scenarios it functioned as a barrier to would-be entrants and as a means of competition among evenly matched rivals.[26] More broadly, advertising became a "leading edge of global consumerism," serving the ideological and market-building needs of a massively productive industrial economy.[27] As post-war economic growth began to falter, the marketing complex embarked upon a reconfiguration that pivoted around information and communication technologies (ICTs) and the systemic integration of consumer data into advertising practices.

The 1970s saw the beginning of what economic historian Robert Brenner calls the "long downturn," a period of a debilitating stagnation that "held the US and world economy in its grip from the early 1970s right up to the middle 1990s, making for the snail-like growth of productiveness and declining living standards for more than a generation."[28] To mitigate slowing growth, the forces of corporate capital began to shift to what David Harvey terms "flexible accumulation."[29] Businesses began to appropriate and invest further in heretofore largely

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[25] Joseph Turow, *Breaking Up America: Advertisers and the New Media World* (Chicago: University of Chicago Press, 1998), 23.
[26] Baran and Sweezy, *Monopoly Capital.*
[27] Schiller, *Mass Communications and American Empire*, 13-14.
[28] Robert Brenner, *The Boom and the Bubble* (New York: Verso, 2002), 4. David Harvey argues that stagnation has been the result of the "inability of Fordism and Keynesianism to contain the inherent contradictions of capitalism" manifested in the built up rigidity of labor contracts and consumer markets, fixed capital investments of US industrialists, and dependency upon state spending commitments. Brenner places more emphasis on the rise of global inter-capitalist industrial competition as Germany, Japan, and other nations revolutionized their means of production in post-war rebuilding efforts. David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Cambridge: Wiley-Blackwell, 1980), 142.
[29] Harvey, *Condition of Postmodernity.* Related framings are Dan Schiller's "informationalized capitalism," Manuel Castells' "information age/network society," and the highly influential, less critical theory of "post-industrialism" developed by Daniel Bell.

publicly funded ICTs in order to reorganize systems of production, finance, and consumption on a global basis.[30] The financial sector became increasingly important as banks and investors pioneered new forms of technology-enabled speculative markets and ratcheted up the use of debt throughout the economy.[31]

At the center of these complex and highly uneven transformations was the expansion of consumer markets, which required the liberalization and privatization of media systems on a global scale. Political force was mobilized to "relax or eliminate barriers to commercial exploitation of media, foreign investment in communication systems, and concentrated media ownership."[32] This was articulated forcefully in the US through the political ideology of market-liberalism and manifested as "deregulation" across a spectrum of public policy issues. In particular, longstanding regulatory frameworks in the finance and technology/media industries were gutted as these two sectors were positioned as the twin engines of a 1990s economic recovery that ultimately proved to be a speculative financial bubble.[33]

Grounded in these transformations, online advertising was constructed as the demands of a capitalist system in need of new investment opportunities converged upon the emerging internet. Disruptive as it would become, the world wide web came about within an already changing media and marketing landscape expressive of the larger political economy. Although mass advertising still maintained tremendous momentum, the rise of more narrowly targeted media platforms including cable television accompanied by a diversifying US population forced

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[30] Schiller, *How to Think about Information*; Schiller, *Information and the Crisis Economy*.
[31] Financialization is ongoing and accelerating in the 21st century and, as evidenced by the "Great Recession," there have been profound consequences for the livelihood of millions of people.
[32] Robert McChesney and Dan Schiller, "The Political Economy of International Communications: Foundations for the Emerging Global Debate about Media Ownership and Regulation," *UNRISD Technology, Business and Society Programme,* no. 11 (2003), iii.
[33] The Glass–Steagall Act was repealed in 1999, which removed rules separating the activities of commercial banks, investment banks, and insurance companies. The Telecommunications Act of 1996 similarly "de-regulated" the media and telecommunications sectors.

changes within the marketing complex.[34] Within an increasingly chaotic media environment, marketers needed to find new ways to "cut through the clutter."

In the 1980s and 90s, advertisers began to employ computerized databases and demographic audience information to target increasingly specific audiences through tactical ad placement across various media ("media buying").[35] New methods of cross-pollinating mass and direct marketing strategies emerged in trends such as loyalty programs and "customer relationship marketing" that sought to establish lasting interactions with core groups of desirable consumers.[36] By the advent of the web in the early 1990s, formerly distinct institutional and strategic spheres within the advertising industry had begun to overlap considerably. The creation of online advertising precipitated a more dramatic realignment and convergence of marketing practices around widespread consumer surveillance and targeted ad messaging. This is the jumping off point of this research effort.

Before outlining the individual chapters, it is important to situate this project within the body of literature that addresses internet advertising directly. Much of the academic research on internet advertising employs experimental methods to advance the efficacy of industry advertising practices.[37] Other approaches use similar techniques to evaluate relationships between advertising consumption and human perceptions of world and self (e.g. body image) or

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[34] Turow, *Breaking Up America.*
[35] Joseph Turow, *The Daily You: How the New Advertising Industry Is Defining Your Identity and Your Worth.* (New Haven: Yale University Press, 2011).
[36] Don Peppers and Martha Rogers, *The One to One Future: Building Relationships One Customer at a Time* (New York: Doubleday, 1993).
[37] Louisa Ha, "Online Advertising Research in Advertising Journals: A Review," *Journal of Current Issues & Research in Advertising* 30, no. 1 (2008): 31-48. Industry executives serve on the editorial boards of major scholarly journals of advertising and marketing, which take as their mission to "bridge the gap between theory and application" (*Journal of Marketing*) by publishing work that addresses the "managerially important problems" (*Journal of Interactive Marketing*) of the marketing industry.

between advertising and physical health (e.g. obesity).[38] This work aims to understand the social effects of certain kinds of commercial messages and to recommend policies or best practices that will reduce harm in cases where adverse outcomes are identified. From a more humanistic perspective, Andrew McStay's *Digital Advertising* provides an outline of the technologies and strategies of online advertising in the 2000s, focusing primarily on developments within the United Kingdom.[39] Christina Spurgeon's *Advertising and New Media* addresses the same period from a more global standpoint, but offers a largely celebratory interpretation of the rise of consumer control in the digital age.[40] While works such as these give useful descriptive accounts, they do not foreground marketing and media as economic structures of power or address the wider social significance of these arrangements.

There is a limited amount of scholarship that approaches internet advertising from a critical structural perspective and very few works that focus on its historical development.[41] Veteran media activist Jeff Chester's *Digital Destiny* provides a valuable historical narrative of internet and digital media policy-making that outlines a range of advertising trends, though his immediate purpose is not stitching them together into a larger analytical framework.[42] Dan Schiller's *Digital Capitalism* stands out as an important contribution to this effort. Schiller devotes a chapter to analyzing the commercialization of the web as an expression of various

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[38] Kimberly Bisseil and Amy Rask, "Real women on real beauty: Self-discrepancy, internalization of the thin ideal, and perceptions of attractiveness and thinness in Dove's Campaign for Real Beauty," *International Journal of Advertising* 29, no. 4 (November 2010): 643-668; Janet Hoek and Philip Gendall. "Advertising and Obesity: A Behavioral Perspective." *Journal of Health Communication* 11, no. 4 (June 2006): 409-42.
[39] Andrew McStay, *Digital Advertising* (New York: Palgrave Macmillan, 2009).
[40] Christina Spurgeon, *Advertising and New Media* (New York: Routledge, 2007). See also Bob Garfield, *The Chaos Scenario* (Nashville, TN: Stielstra, 2009); Jeff Jarvis, *What Would Google Do?* (New York: Collins Business, 2009).
[41] For work that addresses internet advertising from the perspective of social theory, see Greg Elmer, *Profiling Machines: Mapping the Personal Information Economy (Cambridge: MIT Press, 2004)*; Andrew McStay, *The Mood of Information* (New York: Continuum, 2011).
[42] Jeff Chester, *Digital Destiny: New Media and the Future of Democracy* (New York: New Press, 2007).

industries vying for control over the emerging media form and grounds these developments within many of the larger trends of capitalism outlined above.[43]

Joseph Turow's work also forms a key building block for this project. *Breaking Up America* provides an institutional history of the rise of audience segmentation as a marketing tactic, showing that it is not a new practice purely engendered by digital technology.[44] The follow-up *Niche Envy* brings the history further up to date and argues that the computer database has become a dominant mediator of relations between producers and consumers in the 21st century.[45] Finally, 2012's *The Daily You* provides the most comprehensive treatment to date of the economic structure of online advertising and the internal dynamics therein that have produced a system based on consumer profiling.[46] While a substantial portion of the book addresses the later 2000s, Turow makes a valuable contribution to our understanding of online advertising's growth by framing it as embedded within a fundamental shift in the business relations of the established advertising industry. Turow emphasizes the role of media buying agencies, which took up the task of quantifying marketers' return-on-investments via increasingly rationalized forms of measurement and saw the web as a space to extend these practices. Additionally, the body of scholarship sometimes grouped under the heading "surveillance studies" often addresses internet advertising as one among many increasingly prevalent forms of surveillance.[47] Mark Andrejevic's *iSpy* is a particularly valuable contribution that situates consumer surveillance within the broader history of scientific management and

[43] Dan Schiller, *Digital Capitalism: Networking the Global Market System* (Cambridge: MIT Press, 1999).
[44] Turow, *Breaking Up America.*
[45] Joseph Turow, *Niche Envy: Marketing Discrimination in the Digital Age* (Cambridge: MIT Press, 2006).
[46] Turow, *The Daily You.*
[47] See David Lyon, *Surveillance Studies: An Overview* (Malden, MA: Polity, 2007).

presents the concept of "digital enclosure" to theorize how surveillance has become a condition of access for many interactive spaces.[48]

This project builds upon and modifies key themes of this literature by emphasizing the political economic transformations wrapped into the marketing complex's appropriation of the internet medium in relation to specific web technologies, public policies, and especially the exploding financial markets of the dotcom bubble. This entails homing in on the contested interactions among corporate, financial, government, and public advocacy actors in the 1990s when the range of options regarding web development was still relatively broad. The periodization is deliberate. A major argument of this work is that the financial investment of the dotcom era was immensely consequential to online advertising's evolution. Most scholarship in this area glosses over the 1990s as a prosaic era of banner and pop-up ads, a false start in the history of the web's commercialization that was swept away in the bubble's collapse. Even research that directly engages the internet's broader commercialization often gives short shrift to elements of finance, let alone its connections to advertising.[49] Nor is advertising usually addressed by work that focuses on the bubble directly.[50] Political economy of media in general has displayed a tendency to regard finance as divorced from the "real world" of economic production. It is seen as either irrelevant or wasteful, but almost never as integral to the functioning of media systems. With a few notable exceptions such as Janet Wasko's study of the

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[48] Mark Andrejevic, *ISpy: Surveillance and Power in the Interactive Era* (Lawrence: University Press of Kansas, 2009).

[49] James Curran, Natalie Fenton, and Des Freedman, *Misunderstanding the Internet* (New York: Routledge, 2012); William Aspray and Paul E. Ceruzzi, eds., *The Internet and American Business* (Cambridge: MIT Press, 2008).

[50] This holds true along a spectrum of political perspectives. David A. Kirsch and Brent Goldfarb, "Small Ideas, Big Ideas, Good Ideas: Get Big Fast and Dot-Com Venture Creation," in *The Internet and American Business*, ed. William Aspray and Paul E. Ceruzzi (Cambridge: MIT Press, 2008); Carmen M. Reinhart and Kenneth S. Rogoff, *This Time It's Different: Eight Centuries of Financial Folly* (Princeton, NJ: Princeton University Press, 2009); Bruce Abramson, Digital Phoenix: *Why the Information Economy Collapsed and How It Will Rise Again* (Cambridge: MIT Press, 2005); Roger Lowenstein, *Origins of the Crash: The Great Bubble and its Undoing* (New York: Penguin, 2004); Robert Brenner, *The Boom and the Bubble* (New York: Verso, 2002); Doug Henwood, *After the New Economy: The Binge . . . And the Hangover That Won't Go Away* (New York: New Press, 2005).

banking and film industries in the 1930s, Cees Hamelink's analysis of the information services and banking sectors in the 1970s, and Nuria Almiron's recent examination of financialization and journalism, finance has been a "blind spot" of critical media scholarship.[51]

The counter-argument presented here is that while the crash was destructive to the financial wealth created by speculation, it was highly generative of modern structures of online advertising. An outgrowth of the broader trend of systemic financialization, the structural relationship between finance capital and internet technology became a central factor in the re-composition of advertising around new media. Though by no means comprehensively or flawlessly implemented, the advertising system grounded in targeted appeals and consumer surveillance that was instantiated during the dotcom bubble was of a qualitatively different character than mass media advertising. These developments altered the technical character and everyday experience of the web and set a framework for the trajectory of advertising in the 21st century.

Chapter one makes the case that online advertising networks played a pivotal role in the early transformation of the web from a non-commercial space into a functional and increasingly mainstream marketing platform. Beginning in 1996, ad networks married established offline advertising practices with new digital technologies to forge the first viable large-scale online advertising business model. Combining a network sales format with centralized systems for targeted ad delivery, inventory management, and basic audience profiling, ad networks propelled the scale and precision of online advertising far beyond what was available at the time, enabling the nascent industry to make a rapid generational leap. The most important of these companies

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[51] Janet Wasko, *Movies and Money: Financing the American Film Industry* (Norwood, NJ: Ablex, 1982); Cees Hamelink, *Finance and Information: A Study of Converging Interests* (Norwood, NJ: Ablex, 1983); Nuria Almiron, *Journalism in Crisis: Corporate Media and Financialization* (Cresskill, NJ: Hampton Press, 2010). See also Matthew Crain, "The rise of private equity media ownership in the United States: A public interest perspective," *International Journal of Communication*, 3 (2009), 208-239.

was DoubleClick, an early pioneer and enduring market leader (now owned by Google) that came to view its business model as fundamentally about supporting "the logistics of internet advertising on a large scale."[52]

The first chapter shows how DoubleClick and a core group of rivals worked in varying capacities to fashion the web into an advertising-supported medium and to secure their own position at the center of its business structure. Technology appropriation was at the heart of these processes. Ad networks exploited the affordances of the web's communication protocols and the flexible design of the HTTP cookie in order to build a unique system in which ad delivery and consumer profiling functioned as reciprocal processes. Breaking down these details shows how the structure of web technologies played a fundamental role in the creation of a business model in which every ad served was also an opportunity to gather data about internet users. The fluidity with which DoubleClick was able to integrate its operations into the basic functionality of web serving enabled it to grow remarkably fast and solidify market power early on in the industry's development. Moreover, it established the technical foundations for increasingly sophisticated forms of consumer surveillance that came to occupy the center of online advertising's construction.

While chapter one addresses the consequences of technological form, it also advances an argument about the social construction of web advertising technology. As Raymond Williams argued in his seminal study of television: "The key question about technological response to a need is less a question about the need itself than about its place in an existing social situation."[53] Thus, a central task of the first chapter and the dissertation at large is to foreground how online advertising technologies were appropriated and legitimized through the arrangement of material

[52] Kevin O'Connor. *The Map of Innovation: Creating Something out of Nothing* (New York: Crown Business, 2003), 190.
[53] Raymond Williams, *Television: Technology and Cultural Form* (New York: Routledge, 2008/1971), 12.

and ideological resources such as market structures, investment rationales, public policy discourses, and prevailing notions of the 1990s "New Economy."

Chapter two continues this effort by examining the connections between the dotcom investment bubble and the growth of online advertising through the lens of a marketing/finance feedback loop. In the latter half of the decade, speculative investors funded the lavish advertising expenditures of a host of largely unprofitable dotcom companies through which billions of dollars poured into the online ad sector. This generated a surge of demand for online advertising services and helped legitimize the commercial internet at a time when many traditional marketers and ad agencies were still highly ambivalent about interactive media. These outlays, which would have been marked as risky just a few years earlier, were rationalized through a New Economy/Get Big Fast business ideology that greatly privileged marketing practices. Traditional measures of economic valuation (e.g. profitability) were superseded by metrics grounded in advertising principles (e.g. brand recognition, "mindshare"). Advertising thus became a fundamental dotcom business strategy, necessary not only to gain customers, but also to attract essential investment capital.

Linking chapters one and two, chapter three demonstrates the vital role of dotcom investment in the growth of the two most important players the emerging online advertising sector, DoubleClick and its main competitor, CMGI. Case studies are presented that show how these companies' deep integration with financial markets enabled them to rapidly expand their operations and pioneer a business model based on "infrastructure provision." The concept of infrastructure is introduced to theorize the particular arrangement of technologies, service offerings, and business relationships pursued by these companies in their efforts to control and inflate the online ad market. Led by DoubleClick and CMGI, advertising infrastructure providers

leveraged their market positions and technology expertise in order to function as intermediaries for the broadest possible range of ad-related transactions. Fueled by speculative investment, these companies developed massive capacities to deliver targeted ad messages and collect information about web users; DoubleClick alone went from delivering 1.5 billion ads in 1996 to some 621 billion in 2000. Moreover, marketers that had previously exhibited reluctance to spend money on web advertising began to move online as ad buying and campaign management processes were improved. The investments made by DoubleClick and CMGI in this period yielded an inertia that granted them significant market power and put them in a position to shape the particulars of online advertising's construction.

The chapter concludes by arguing that the collapse of the online advertising market in the wake of the dotcom crash has been greatly overstated even among its most insightful observers.[54] While the failure of the New Economy momentarily stalled online ad spending, the larger consideration is that in the short period of the bubble, a core group of companies emerged to provide a robust infrastructure for online advertising that included a greatly enlarged capacity to deliver targeted advertising and profile consumers. This "surveillance infrastructure" is the real legacy of the dotcom era and is examined in detail in chapter four.

In 1998 and 1999 a critical mass of major marketers began to adopt the internet as an advertising tool and sought to use their influence to control the medium to the greatest extent possible. Responding to marketer demands to increase the "relevance" of targeted ads and provide more precise measures of return-on-investment, DoubleClick and other infrastructure providers pursued advances in behavioral profiling and expanded forms of data exchange among their publisher and marketer clients. These practices hinged upon increasingly invasive and often

[54] Turow, *Niche Envy,* 40.

secretive practices of data collection, whereby information was gathered about internet users for the purpose of cataloguing them for differential engagement. Although these systems often remained ungainly, the developing surveillance infrastructure signaled an important milestone in the progression of online advertising that took it far beyond the profiling techniques created by ad networks just a few years prior.

Chapter four explains how, even as new practices of surveillance-based advertising were implemented on a competitive and ad hoc basis, formerly distinct elements of the marketing complex began to converge around the systematic collection, analysis, and exchange of consumer data. Such data became the focal point of marketers' ongoing crusade to increase efficiency and maximize returns, which demanded blurring the boundaries that separated the various constituents of the marketing complex. Internal competition over the particulars notwithstanding, the creation of a surveillance infrastructure was driven by marketers' overarching needs to bring the internet into the marketing complex and, to the greatest extent possible, maximize its utility for purposes of selling. These developments were at the center of online advertising's construction in the late 1990s and remain a pivot around which contemporary marketing practices are being reformulated. The chapter concludes by exploring the ways in which surveillance-based advertising reproduces social discrimination and inequality in online contexts. Such discrimination is facilitated by processes of "digital enclosure" whereby submission to surveillance increasingly becomes a condition of internet access.

The fifth chapter chronicles the public policy struggle between advocacy groups, industry coalitions, and government actors over issues of online data collection, disclosure, and consent. In what was framed as a matter of internet privacy, these groups mobilized to influence the shape of online advertising's most basic regulatory parameters. The flashpoint of this conflict was a

controversy surrounding DoubleClick's acquisition of the marketing database company Abacus Direct, whereby anonymous online profile data was combined with personally identifiable information obtained from offline sources. However, this was merely the highest-profile event in a more protracted confrontation over whether federal regulation would mandate that individuals be given some control over the data produced by their internet use or whether a regime of industry "self-regulation" would be extended online.

Privacy advocates achieved some measurable victories, stewarding the passage of the Children's Online Privacy Protection Act in 1998 and pressuring Congress to consider "opt-in" legislation mandating that companies obtain prior consent from all web users regarding data collection practices. This threatened to undermine the developing surveillance infrastructure business model that relied on pervasive data collection as a default practice of internet use. Despite broad public support for privacy rules, a sector-spanning coalition of industry groups successfully fought to maintain the status quo of advertising self-regulation by exerting their influence over a policy-making system unfit to withstand commercial power. The policy regime that was enacted established a framework for data collection and consumer privacy on the internet at the start of the 21st century.

This research draws from a range of largely archival sources, including:

- Trade publications in the advertising and information technology sectors (e.g. *Advertising Age*, *Ad Week, InternetWeek, ComputerWorld*)
- National newspapers (e.g. *New York Times, Wall Street Journal*)
- Reports and press releases from trade associations (e.g. Interactive Advertising Bureau, National Venture Capital Association)
- Archived corporate web sites (accessed through the Internet Archive digital library)
- Regulatory and Congressional hearings and documentation (e.g. Federal Trade Commission reports)
- The William J. Clinton Presidential Library archives, paper collection of Ira Magaziner (Senior Policy Advisor, 1993-1998)
- Corporate financial data (e.g. annual reports to shareholders and financial information from database services such as Bloomberg)

- Selected interviews

The advertising trade press in particular is a major source throughout and as such warrants a brief comment. Like all sources of evidence, the intended audience and objectives of trade publications must be factored into their interpretation. These are commercial enterprises that often engage their subject absent much contextualization and at times with a degree of sensationalism. Nevertheless, trade publications provide valuable beat reporting covering developments in business strategy, technology, public policy, and trade association activity. Beyond this, the trade press represents a conversation among industry observers (journalists), analysts, and practitioners, including many advertising and marketing executives who are frequently quoted as sources and often author opinion-editorial pieces. In this way, trade publications offer a gateway to understanding how decision-makers talked among themselves in a public forum, clarifying their assumptions, anxieties, and ambitions, and revealing collective agreements and disputes regarding the nature of the perceived challenges facing their industry in this period.[55]

While the ad industry trade press is a significant source, the Madison Avenue establishment and web publishers themselves are somewhat secondary actors in this narrative, which places greater emphasis on the relations between marketers, investors, government, and the major companies of the newly created online advertising services sector. This latter group pioneered the technology appropriation and market-building activities that produced the greatest impact on online advertising's construction. Advertising infrastructure providers in particular were among a vanguard within the marketing complex that toiled within multiple social arenas to institute advertising as a standard business model on the web. Among this group, DoubleClick is

[55] Thomas F. Corrigan and Matthew Crain, "Listening in" and "Burrowing": Toward a Methodology of the Political Economy of Communications (paper presented at the Union for Democratic Communications conference, San Francisco, CA., 2013).

a touchstone of all the vectors of ad development addressed in this research: integration with financial markets, the socio-technical relations of the ad network format and subsequent surveillance infrastructure, and public policy conflicts regarding data collection and privacy. Moreover, as addressed in the conclusion, the company was acquired by Google in 2007 and now comprises a major component of its preeminent online advertising business, revealing a concrete trajectory from the dotcom era to the present day ad landscape. The dotcom companies and their investors are highlighted for similar reasons. These groups played a vital and generally overlooked role in funding early online advertising at a time when most marketers were yet unconvinced of the web's value as an advertising platform. While dotcoms and ad infrastructure providers were on the front lines, many among the ad industry proper remained ambivalent about the internet until marketers compelled them otherwise.

Of course media systems do not follow linear paths of development. This research makes clear that the construction of online advertising was a highly contingent process involving multiple interests. Numerous people and institutions pursuing diverse objectives and limited by specific social contexts influenced the web's evolution, which remains ongoing and uneven. As Tim Berners-Lee, the web's primary inventor, remarked, the web has grown by a "process of accretion."[56] So there is a practical truth to media critic Bob Garfield's quip that attempting to write about the internet is like "sketching the Kentucky Derby."[57] Nevertheless, three decades after the web's introduction it is possible to grasp its basic characteristics and organizing principles. It is also possible to build an evidence-based argument as to why such characteristics and principles have come to exist. The web we have today is not the only one that could have

[56] Berners-Lee and Fischetti, *Weaving the web*.
[57] Garfield, *The Chaos Scenario*, 243.

been constructed. This particular version – heavily integrated into the sponsor system – has come into being for reasons that can be explained. This dissertation contributes to this effort.

In the introduction of the tenth anniversary edition of *No Logo*, Naomi Klein contemplates the nature of the research she conducted for the original book. She notes that once one begins to critically examine the activities of advertising and branding, the conversation quickly broadens to include "everything except marketing – from how products are made in the deregulated global supply chain to industrial agriculture and commodity prices. Next thing you know you were also talking about the nexus of politics and money that locked in these wild-west rules through free-trade deals at the World Trade Organization ... In short, you were talking about how the world works."[58] At the heart of Klein's remarks is the understanding that to speak of advertising is to speak of contemporary capitalism. Ultimately, there was a cross-sector competitive imperative to colonize the emerging online medium for selling. This research clarifies the specifics of this history and presents an understanding of the web as a technology firmly rooted in historical social relations. It emphasizes the interplay of finance, technology, and public policy in shaping the development of commercial media systems and delimiting the boundaries of their acceptable use. At the same time, it sheds light on the dynamic nature of capitalism by charting its interaction with a powerful new interactive medium that was and remains simultaneously disruptive and catalytic.

[58] Naomi Klein, *No Logo: No Space, No Choice, No Jobs,* Tenth Anniversary ed. (New York: Picador, 2010), xvii.

Chapter 1

Advertising at the Dawn of a New Medium: Networks, Cookies, and DARTs

This chapter makes the case that a group of newly formed companies called online advertising networks played a pivotal role in catalyzing the transformation of the world wide web from a non-commercial space into a functional and increasingly mainstream advertising platform. Beginning in 1996, ad networks married established offline advertising practices with new digital technologies to forge the first viable large-scale online advertising business model. Combining distributed sales representation with centralized technological systems for targeted ad delivery, inventory management, and basic consumer profiling, ad networks propelled the scale and precision of online advertising far beyond what was previously possible, enabling the nascent industry to make its first rapid generational leap. The most important company in this period was DoubleClick, an early pioneer and enduring market leader whose management came to view its business model as fundamentally about supporting "the logistics of internet advertising on a large scale."[1]

Emphasizing DoubleClick's development in particular, this chapter demonstrates that ad networks not only enabled the growth of web advertising, but laid the groundwork for a realignment of the larger marketing complex in relation to consumer surveillance. Through competition and collaboration, DoubleClick and others worked to fashion the web into an advertising-supported medium and to secure their own position at the core of its business structure. As more websites sprang up, more consumers moved online, and more financial capital flooded into the emerging dotcom sector, ad networks sought to integrate publishers, marketers, and audiences into a network-centric advertising economy. Responding to marketer demands,

[1] Kevin O'Connor. *The Map of Innovation: Creating Something out of Nothing* (New York: Crown Business, 2003), 190; Other important companies in this early period were Focalink, NetGravity, and the holding company CMGI. These and others are addressed in subsequent chapters.

they created new technical means of profiling web users based on their behaviors in order to deliver targeted advertising with greater precision than the offline media of the day.

Technology appropriation was central to these tasks. Ad networks exploited the affordances of the web's communication protocols and the flexible design of the HTTP cookie in order to build a unique system in which ad delivery and consumer profiling functioned as reciprocal processes. Close examination of these components shows how the structure of web technologies played a fundamental role in the creation of the network business model in which every ad served was also an opportunity to gather data about internet users. The fluidity with which DoubleClick was able to integrate these operations into the basic functionality of web serving enabled it to grow remarkably fast and solidify market power early on in the industry's development. Before stepping into this narrative in detail, this chapter sets the stage with a summary of the pre-ad network era of online advertising.

Online Advertising before Networks

Marketers were interested in the possibilities of "interactive media" well before the advent of the world wide web. The 1970s and 1980s saw failed attempts to commercially develop early networked information services such as videotex and teletext, which transmitted text-based data over telecommunications lines and broadcast signals.[2] More advanced computer-based commercial online services such as CompuServe, Prodigy, and America Online (AOL) were created in the 1980s and some began to carry advertising in the early 1990s, although buy-in from marketers was limited.[3] The Clinton and Gore administration's promotion of the coming "information superhighway" spurred interest and anxious speculation among the marketing

[2] Vincent Mosco, *Pushbutton Fantasies: Critical Perspectives on Videotex and Information Technology* (Norwood, NJ: Ablex, 1982).
[3] "Prodigy cuts in-house ad sales team," *Advertising Age*, May 9, 1994.

complex during this period, though most of the focus was on interactive television (iTV) and, to a lesser extent, computer-based publishing technologies such as CD-ROMs.[4]

By the end of 1994, it was becoming clear that the personal computer and not the television would be the dominant interactive medium of the foreseeable future.[5] Commercial online services had grown in popularity and emerged as a principal means of internet access, although they would soon be unseated by graphical web browsers and dial-up internet service providers.[6] Still, compared to the established mass media, the world wide web was a relative backwater. The total count of websites and users numbered in the tens of thousands and the medium was seen as both hard to navigate for general audiences and as harboring a culture that was largely hostile to commercial purposes. "Academic, international, and apparently free, the internet developed into an almost militantly egalitarian and cooperative community," recalled Marc Andreessen, co-creator of the Mosaic/Netscape web browser. "Virtually nobody made any money from it directly."[7]

By 1995 select magazines and newspapers had begun to experiment in the online space, incorporating limited advertising when possible.[8] Often this meant partnering with commercial online services, but gradually publishers began creating their own websites, as did broadcasters and increasing numbers of marketers themselves.[9] Still, advertising on the net was scarce. The first web banner advertisements did not appear until the fall of 1994 and Yahoo, one of the first websites to reach large numbers of users on a daily basis, did not begin hosting ads until mid-

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[4] Marcia Magiera, "Map to superhighway beset by uncertainty," *Advertising Age*, January 17, 1994.
[5] Debra Aho Williamson, "Turning on the PC Turns Off Pay TV," *Advertising Age*, September 19, 1994.
[6] Although at the time, commercial online services were primarily "walled gardens" that offered limited access to the wider internet.
[7] Marc Andreessen, "Netscape: Portal to the Web," in *Architects of the Web: 1,000 Days that Built the Future of Business,* ed. Robert Reid (New York: Wiley, 1997), 5.
[8] Many had tried and failed earlier to bring advertising to CD-ROMs and newspapers in particular were still feeling the pain of the teletext failures.
[9] Lawrence Aragon, "The real thing?," *PC Week*, December 16, 1995.

1995.[10] Though they were intrigued by its potential, the majority of traditional marketers and ad agencies were highly ambivalent about the internet as an advertising medium. Although a few of the most highly trafficked sites such as Hotwired and ESPNet were able to attract some notable sponsorships early on, there was no consensus among marketers that the web could be successfully commercialized and certainly no infrastructure to support advertising on a large scale.[11] At the same time, a fear of being left behind compelled the marketing complex to pursue the new interactive media. Proctor & Gamble chairman Edwin Artzt gave a high-profile address to the American Association of Advertising Agencies that called upon the ad industry to "grab technology change in its teeth" in order to create the "greatest selling tool ever conceived."[12] What resulted was a mixed bag of experimental online advertising attempts that primarily added fuel to marketers' uncertainty. It was not until 1996 that a core group companies developed the technologies and business services that enabled online advertising to expand in a more systemic fashion. No company was more important in these efforts than DoubleClick.

DoubleClick's roots stretch back to the period in which business historian Daniel Pope locates the institutional and ideological "making of modern advertising."[13] Founded in Omaha in the 1920s, the tiny ad agency of Bozell & Jacobs began as an intermediary between local newspapers and real estate brokers. It found moderate success in its first three decades, acquired smaller competitors, and relocated its headquarters to New York in the 1960s.[14] By the 1980s the company had become a major player on Madison Avenue and among the largest 15 agencies in

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[10] John Cassidy, *Dot.con: The Greatest Story Ever Sold* (New York: HarperCollins, 2002), 78, 90.
[11] Jim Clark, *Netscape Time: The making of the billion-dollar start-up that took on Microsoft,* with Owen Edwards (New York: Saint Martins, 1999), 107.
[12] Artzt was primarily talking about iTV, but his message applied to all interactive media. Edwin Artzt, "The Future of Advertising," May 12, 1994, http://adage.com/article/news/p-g-s-artzt-tv-advertising-danger-remedy-embrace-technology-return-program-ownership/87052/; Melanie Wells, "Out of the program: Artzt's vision of future media is chilling to midsize shops," *Advertising Age*, May 16, 1994.
[13] Daniel Pope, *The Making of Modern Advertising* (New York: Basic Books, 1983), 7.
[14] *Advertising Age Encyclopedia* (September 15, 2003), s.v. "Bozell (Bozell & Jacobs)," http://adage.com/article/adage-encyclopedia/bozell-bozell-jacobs/98356/

the US. In the early 1990s under the banner Bozell Jacobs Kenyon & Eckhardt (BJK&E), the firm was among the first advertising holding companies to move into new media. In 1993 a business-to-business division of BJK&E called Poppe Tyson acquired Carlick Advertising, an agency based in Mountain View, CA that specialized in the technology sector.[15] David Carlick, a veteran marketer of personal computers, was made senior vice president and general manager of the combined operation's West Coast office.

Led by Carlick, Poppe Tyson transformed itself from an "unglamorous" business-to-business shop into a "sleek, trendy cyber-agency leading Madison Avenue's uncertain charge" into the realm of "interactive media."[16] Interactive media was a catchall term for a range of emergent electronic platforms whose common attribute in the eyes of the ad industry was the potential "to go beyond the one-way flow of traditional media" in order to engage customers in more meaningful ways.[17] Poppe Tyson quickly established itself as a leader in the sector by casting a wide net of interactive advertising projects spanning CD-ROMs, commercial online services, and proto-interactive television systems for clients such as Time Warner, Chrysler, and American Airlines.[18]

But the agency's most consequential interactive ventures were based on the fledging world wide web. Poppe Tyson was one of the first traditional ad agencies to design corporate websites and manage early online ad campaigns for a handful of major marketers in the technology sector including Hewlett Packard and Intel.[19] In a connection that foreshadowed the important link between online advertising and public policy, Poppe Tyson also created some of

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[15] "Poppe Tyson buys high-tech shop," *Advertising Age,* March 22, 1993, 49.
[16] Sally Goll Beatty, "Poppe Tyson leads the charge of agencies signing on the Internet," *Wall Street Journal*, February 2, 1996, B3.
[17] Joseph Turow, *The Daily You: How the New Advertising Industry Is Defining Your Identity and Your Worth.* (New Haven: Yale University Press, 2011), 38.
[18] Gary Levin and Jennifer Lawrence, "Bozell, Jacobs, Kenyon & Eckhardt," *Advertising Age* August 15, 1994, 18; Scott Donaton, "While other agencies talk, Bozell acts," *Advertising Age*, April 4, 1994, 20.
[19] Beatty, "Poppe Tyson leads the charge."

the first official websites for the Clinton administration, whose hands-off approach to regulating online advertising would later be influenced and applauded by the ad industry.[20] Doubling down on these early successes, BJK&E rolled the new media operations of all of its subsidiary companies into Poppe Tyson in spring 1995 and named Carlick as a top executive.[21] The reorganization marked BJK&E as among the first Madison Avenue holding companies to take the interactive sector seriously and signaled that company leadership saw the web in particular as its brightest prospect.[22]

While most mainstream advertising agencies dismissed the web as a 'low budget and experimental" fringe medium, Poppe Tyson was not entirely alone in the market for online business services.[23] In the website development sector the agency faced competition from a number of specialized interactive design companies such as Modem Media, Razorfish, and Organic Online. These newly formed ventures emphasized their independence from the advertising industry establishment, claiming that interactive media had brought about a paradigm shift that required different marketing approaches, often implemented through what was then cutting-edge web design.[24]

Conversely, Poppe Tyson's major contribution to the development of online advertising came not from breaking the mold of established ad industry practices, but rather grew out of a very conventional ad sales relationship with a mold-shattering internet company. That company was Netscape, whose dominance in the web browser market was rapidly making it a widely recognized symbol of the internet revolution. The default home page of Netscape's Navigator

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[20] See chapter five.
[21] Cathy Taylor, "BJK&E forms interactive operation; separate unit set up for creating web sites and related activities," *Adweek*, April 17, 1995, 3.
[22] Turow points to Ogilvy & Mather as the early interactive leader by a wide margin, but overlooks BJK&E. Turow, *The Daily You*, 38.
[23] Turow, *The Daily You*, 36.
[24] Beatty, "Poppe Tyson leads the charge."

browser was the company's own website, making it among the most visited locations on the web throughout the 1990s. While negotiating a web development contract with Poppe Tyson, Netscape chairman Jim Clark "jokingly mentioned that the company should take ads" in order to monetize the immense popularity of its website.[25] But Netscape saw its primary business as software development and IT services and was reluctant to divert resources to advertising sales. Carlick reportedly "jumped on the opportunity," proposing a deal whereby Poppe Tyson would sell ad space on Netscape's web properties on a commission basis, effectively acting as an outside sales team.

Under this arrangement, Netscape became one of the first companies to earn significant online advertising revenues and Poppe Tyson began to sketch the contours of a new business model that would transform the web into a fully-fledged advertising platform.[26] With Poppe Tyson's assistance, Netscape leveraged its dominance in the browser market into an alternative source of income, quickly securing major advertisers such as AT&T, MasterCard, and Adobe Systems.[27] The most popular site on the web was now open for business as a billboard for corporate sponsors. Recognizing the potential of this sales arrangement, Poppe Tyson began to broker ad space for other major websites of the day such as Playboy and the portal Excite.[28] In this capacity, Poppe Tyson became one of the first agencies to offer online advertising sales representation ("sales repping"), utilizing its rolodex of marketer clients and experience with online media to operate as an exclusive external advertising sales force for select web publishers. While this specialized sales intermediary function was a well-established business model in other

[25] Debra Aho Williamson, "When buyers become sellers; Poppe Tyson leads list of agencies exploring a risky new business," *Advertising Age*, July 17, 1995, 12.
[26] Cathy Taylor, "ESPN site still holds record for pricing," *Adweek*, August 7, 1995, 10.
[27] Debra Aho Williamson, "When buyers become sellers."
[28] David Sidor, *The Click* (iUniverse: 2004).

ad-supported media sectors (more on this below), its application to the internet was novel in 1995.

While highly publicized interactive television experiments like Time Warner's Full Service Network were crumbling, the rapid growth of commercial online services and the world wide web catapulted the internet to the forefront of the new media landscape. Increasing excitement and anxiety regarding interactive media swept through the marketing complex. As Netscape became a stock market phenomenon and kick started the dotcom financial bubble, Poppe Tyson was inking deals with sponsors to shell out an unprecedented $30,000 a month to display banner ads on the browser-maker's home page. As *MediaWeek* reported, "with that sort of money trading hands, it's no wonder that by the start of 1996, several of the web's largest [publishers] were rumored to be shopping for new or additional sales talent."[29]

Competitors of various stripes including design shops CKS Group and True North Media began "developing ways to sell ad space on interactive content."[30] Newly formed repping ventures like Softbank Interactive Marketing and WebRep entered the market as well. Even more significantly, Katz Media Group and Petry, Inc., leaders in the broadcasting ad repping business, also threw their hats into the ring, forming dedicated units to represent web publishers, commercial online services, and, just in case, the floundering interactive television projects.[31] The entrance of established broadcast rep firms into the online market signaled that the web was gaining legitimacy among established industry players.

While some of the leading websites such as Microsoft's MSN opted to maintain ad sales in-house, the cost of assigning or hiring a dedicated online sales force was prohibitive for many

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[29] Cathy Taylor, "The repping of the Web," *MediaWeek*, February 26, 1996, IQ20.
[30] Debra Aho Williamson, "Marketers link up to tune of $54.7 Mil," *Advertising Age*, January 22, 1996, 28; Sidor, *The Click*.
[31] Taylor, "The repping of the Web."

web publishers.[32] Even for those with deep pockets, expertise in the quickly evolving online platform proved to be a scarce resource. Major media companies including CBS and NBC, arguably among the best positioned to sell advertising inventory, hired outside firms to handle their web inventories.[33] These developments helped contribute to a surge in demand for web rep companies in an online advertising market that was essentially non-existent just one year earlier. The sector experienced a rush for sales personnel with any modicum of interactive experience, e.g. "anyone who [could] translate web gobbledygook into language that marketers [could] understand."[34]

Aggregate online advertising spending was picking up steam, growing from virtually nothing in 1994 to $55 million in 1995 and $267 million in 1996.[35] Propelling this growth was the rising number of ad rep firms as well as the success of premium sites like HotWired in attracting lucrative sponsorships.[36] Netscape alone billed online marketers nearly $2 million in the fourth quarter of 1995.[37] By February 1996, *Advertising Age* declared that "the hottest web business" was no longer creating websites; it was "selling ads on them."[38]

As this momentum accrued, BJK&E's multi-pronged approach drummed up controversy among its peers and in the trade press.[39] As one of the first and most visible agency conglomerates to offer web design, media buying, and online ad repping services, BJK&E and Poppe Tyson in particular were criticized for operating with significant conflicts of interest. *Advertising Age* warned of the ethical breach engendered "when an agency charged with getting

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[32] Kim Cleland, "A new breed of savvy online salesmen offer one-stop shop for advertisers," *Advertising Age,* February 19, 1996, 36.
[33] Debra Aho Williamson, "CBS to Outsource Web Ad Sales," *Advertising Age*, January 29, 1996.
[34] Taylor, "The repping of the Web."
[35] Peter C. T. Elsworth, "Internet Advertising Growing Slowly," *The New York Times*, February 24, 1997; Interactive Advertising Bureau, *2000 IAB Internet Advertising Revenue Report* (April 2001), 6.
[36] Taylor, "ESPN site still holds record for pricing."
[37] Lynda Askey and Cathy Taylor, "After the year of the web," *Adweek*, January 15, 1996, 27.
[38] Kim Cleland, "A new breed of savvy online salesmen."
[39] Debra Aho Williamson, "When buyers become sellers."; Sidor, *The Click*.

the lowest price possible for its marketer client is also supposed to get the highest price possible for its media client."[40] Facing backlash from ad agency media buyers hesitant to purchase inventory from a rep firm owned by a competing agency, BJK&E announced in late 1995 its intention to spin off its Poppe Tyson web ad repping division into a stand-alone company of which it would retain an ownership stake.[41] This company would be rechristened DoubleClick.

Despite online advertising's upward trajectory, it remained far outside of the marketing mainstream, accounting for just two-tenths of one percent of total ad spending in 1996.[42] The majority of spending came from a relatively small group of marketers with the wherewithal and inclination to allocate a portion of their ad budgets to experimental platforms.[43] A far greater number of marketers and ad agencies exercised deliberate caution when approaching interactive media and the web in particular, a conservatism that reflected their ambivalence regarding its practicality and efficacy as an advertising vehicle.[44] It is telling that BJK&E, one of the early agency leaders of the nascent online advertising sector, promptly jettisoned its web repping business in the face of moderate controversy.

The collective hesitation among the marketing complex establishment was rooted in a few key factors. For starters, there were simply not that many consumers on the internet, limiting its attractiveness to mass marketers. And while internet usage was growing quickly and the average user was demographically desirable, the roughly 18 million online consumers were unevenly scattered among various local internet service providers and commercial online service

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[40] Debra Aho Williamson, "When buyers become sellers."
[41] Sidor, *The Click*;. Kim Cleland, "Poppe creates web net," *Advertising Age,* October 30, 1995, 16.
[42] Calculated from Interactive Advertising Bureau, *2000 IAB Report* and United States Census Bureau, "Advertising–Estimated Expenditures by Medium [Table 1243]," *The 2010 Statistical Abstract,* http://www.census.gov/compendia/statab/2010/tables/10s1243.xls
[43] These were largely companies in the technology, financial services, and emerging dotcom sectors. See chapter two on dotcom bubble and advertising demand.
[44] Turow, *The Daily You*, chapter two.

providers like AOL and Prodigy.[45] In other words, there was really no means to replicate the model of mass advertising favored by many national marketers.

Secondly, the business landscape of online advertising was simply too chaotic for media buyers/planners – the group within the ad agency system responsible for placing ads in various media outlets. The volume and diversity of websites was growing quickly, but there were no established criteria upon which they could be reliably judged. Offline media had customary pricing models such as CPM (the cost to reach 1,000 people), third-party audience measurement systems like Nielsen Ratings, and standard creative formats like the 30-second spot or quarter page ad. While some of these systems were applied hodgepodge to the web by assorted publishers and sales reps, few standards had emerged.[46] Trade groups such the Interactive Advertising Bureau (IAB) were formed to tackle these issues, but they found little early success amidst a chaotic and rapidly expanding market.

As Joseph Turow argues, the major exception to this state of affairs was the implementation of the mouse click as a standard measure of value for online advertisements.[47] The click was compelling to marketers and media buyers because it offered a measure of verification that was unique to interactive media and provided a quantifiable representation of consumer intention.[48] In short order the "click-through rate" – the percentage ad impressions that generate clicks – became a more or less universal metric for evaluating the efficacy of banner

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[45] Number represents the US Census tally of households with internet access in 1997, the first year for which data is available. US Census Bureau, "Computer and Internet Use in the United States: 2010," http://www.census.gov/hhes/computer/; Another source estimated that 12% of US adults were online in 1996. DoubleClick, *2002 Annual Report*, ii.

[46] Proctor & Gamble mounted an early effort to seize control of pricing standards (cost-per-click instead of CPM) that was mostly unsuccessful. Uniform web audience measurements and ad performance metrics were seen as major problems since day one. These will be addressed elsewhere in greater detail.

[47] Turow, *The Daily You*, 36.

[48] This had previously been the exclusive purview of direct response marketing (e.g. catalogs, infomercials, telemarking).

ads.[49] Nevertheless, the practice of buying ad space online remained cumbersome for most media buyers. Every aspect of a banner campaign, including the specifics of the creative, the placement and duration of ads, and expected audience exposure had to be negotiated between media buyers and the ad sales representatives of web publishers.[50] Absent established conventions, ad planning was largely a guessing game muddied by publisher sales forces that would extoll the merits of their inventory without providing supporting data or offering streamlined mechanisms to conduct business. Some reasonable assumptions were possible – visitors to ESPNet were likely sports fans – but all in all the tools of early web ad management were blunt instruments.

Admonishment regarding the lack of standard measures and practices became an oft-repeated refrain in the trade press. "If the web is a 100,000-plus channel universe in which each site is its own program, [web advertising] so far is an exasperating reflection of that chaos," exclaimed *MediaWeek*.[51] Even DoubleClick's Carlick, limit-testing his role as one of online advertising's top evangelists, unfavorably likened the online ad market to "Dodge City," admitting, "the structure's a mess right now."[52]

Diagramming DoubleClick

At the start of 1996, the newly independent DoubleClick and a cadre of rivals set out to bring order via conquest to the unruly online advertising marketplace. Their efforts brought about a business model that blended established network-based sales representation practices with innovative ad delivery and management technologies. Though varied in its implementation, this

[49] But even this was challenged on multiple fronts. Not everyone bought into the notion that the web was primarily a direct response medium, arguing that it could function as a branding platform much like television, thus rendering click-through rates inadequate measures of advertising effectiveness. This debate is still ongoing. Farhad Manjoo, Facebook Followed You to the Supermarket, *Slate*, March 20, 2013, http://www.slate.com/articles/technology/technology/2013/03/facebook_advertisement_studies_their_ads_are_more_like_tv_ads_than_google.html

[50] Richard Karpinski, "Ad Sales Go Real-Time," *Internet Week*, December 1, 1997, 19.

[51] Taylor, "The repping of the Web."

[52] Taylor, "The repping of the Web."

strategy was consistent to the extent that it involved the development of database-driven, *centralized ad serving systems* to manage advertising processes across groups of websites aggregated into distinct *networks.* Loosely, ad serving systems represented an advance and appropriation of technology, while networks represented a repurposed business structure.[53] Together these components qualitatively altered the character of advertising within the emerging digital media landscape. We turn detailed attention to them now.

As DoubleClick separated from BJK&E, it began to assemble a collection of popular websites in order to sell bundled ad packages from a larger pool of inventory. The goal was to serve as the exclusive ad sales representative for a group of leading web publishers in order to provide a one-stop-shop to advertisers looking to reach large aggregates of online consumers. In other words, DoubleClick sought to tame the chaos of the online ad market for marketers that needed assistance buying ad space and for publishers that needed help selling it.

With many marketers and media buyers wary of online advertising, DoubleClick utilized familiar broadcast terminology calling its stable of web publishers a "network" and even giving it call letters: "WCLK." But the network model went deeper than employing well-known references. John Nardone, media director at the interactive agency ModemMedia, noted that "DoubleClick was one of the earliest proponents of thinking about the web as a series of big TV networks."[54] In the press, Carlick explicitly invited comparisons between DoubleClick and the major television networks, while emphasizing the allegedly superior "interactive" qualities of the

[53] These components can be understood as functioning together as a "socio-technical system." Tarleton Gillespie, *Wired Shut: Copyright and the Shape of Digital Culture* (Cambridge: MIT Press, 2007).
[54] Sally Goll Beatty, "Digital Equipment's AltaVista Becomes Fair Game for Advertisers, *Wall Street Journal*, December 18, 1996.

online medium. "ABC, NBC and CBS can serve big numbers of couch potatoes to advertisers. WCLK will be the first network to deliver a huge, audited number of interactive users."[55]

While DoubleClick was among the first to apply the network sales structure to the web, the strategy itself, much like that of ad sales representation, was already firmly established in the offline advertising sector.[56] The tactic of selling ad space across multiple media properties developed with print in the late 19th century and took on a more modern network-based form with the rise of radio in the 1930s. As early as 1889, J. Walter Thompson sold bundled ad inventory across some 30 major magazines such as *Harper's* and *Cosmopolitan*.[57] Though Thompson would abandon ad sales to focus on creative, Edward Petry later established one of the first radio advertising sales representation firms in 1931, moving into television in the 1950s, and to the web in the 1990s.[58] In 2001 the ad sales representation sector at large (representing primarily small an mid-size "old media" outlets, e.g. newspapers, magazines, radio, and television) earned $3.8 billion in revenues among some 2,800 businesses.[59]

The basic character of the network business model has remained stable in print, broadcast, and online media. The aggregation of various media properties presents opportunities to create economies of scale for marketers looking to reach large groups and can offer prospects

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[55] Cleland, "Poppe creates web net."

[56] DoubleClick was among the first, but the not the first. As early as August of 1994, fourteen mid-size commercial online services partnered to form the TeleGrafix Cybermedia network, billed as "the world's first interactive advertising network." The aim was to give marketers "convenient access to new media" through a "single point of contact." Ahead of its time, TeleGrafix found little success as there was slight demand for ad inventory on the bulletin board systems of disparate commercial online service providers. Pat Clawson, "Fourteen online services form first interactive advertising network, *PR Newswire*, August 18, 1994.

[57] "80% of the Advertising in the US is through J. Walter Thompson," [Ad placed in Blue Book of Trademarks and Newspapers, 1889], Emergence of Advertising in America, 1850-1920 Collection, J0101, John W. Hartman Center for Sales, Advertising & Marketing History, Duke University David M. Rubenstein Rare Book & Manuscript Library, http://library.duke.edu/digitalcollections/eaa_J0101/#info; Debra Aho Williamson, "When buyers become sellers."

[58] Petry Media, "Petry Media: More Than 80 Years of Excellence in 2011," http://www.petrymedia.com/history-media

[59] Kevin Culbert, *Media Representative Firms in the US.* IBISWorld Industry Report 54184 (April 2010). In 2010, suffering from declines in overall ad spending relating to 2008's Great Recession, the industry netted $2.6 billion dispersed among 2,100 companies

for enhanced audience targeting within those groups. From its inception DoubleClick hinted at plans to form various "subnets" in order to target specific audience niches, but the initial task at hand was to serve marketers and agencies looking to easily purchase large quantities of ad impressions across many web destinations.[60] In order to put this vision into practice, DoubleClick would need to greatly expand its technological capabilities.

The network model introduced substantial technical and operational hurdles that exceeded the expertise of most ad sales personnel. During the separation from BJK&E, DoubleClick's leadership realized they needed a means to centrally manage and deliver ads across the network they were compiling and that building such capacity would require significant investment in technology and labor. Even the tech-savvy Poppe Tyson had outsourced difficult technical work to firms like the early web measurement specialist I/PRO and the broadcast ratings giant Nielsen Media Research, which was inching its way into the online market.[61]

DoubleClick on the other hand sought an in-house solution for both large-scale ad delivery and comprehensive audience reporting. It found a partner in Atlanta-based start-up Interactive Advertising Network (IAN). IAN's founders, Kevin O'Connor and Dwight Merriman, were software engineers and successful entrepreneurs in the computer networking sector.[62] Like many others surveying the new media landscape at the time, O'Connor and Merriman saw commercial opportunity in the burgeoning web and created IAN with the original plan to "act like your local cable company" by aggregating channels of subscription-based content online.[63] They predicted that content subscription was going to be the major online

[60] Cleland, "Poppe creates web net."
[61] Cleland, "Poppe creates web net."
[62] Intercomputer Communications Corp. made networking software that linked PCs and mainframes. The company grew to $35 million in sales before Digital Communications Associates bought it in 1992. Pat Riedman, "Digital Media Masters: Kevin O'Connor," *Advertising Age*, September 23, 1996, 50.
[63] O'Connor, *The Map of Innovation*, 76.

business model and sought to simplify the process by creating a platform for one-stop shopping. When it became apparent that consumers were largely rejecting online subscription services, O'Conner and Merriman changed course, focusing instead on advertising. Adapting their original business plan, they developed the technical means to aggregate ad buys for marketers across websites, laying the groundwork for what would become the ad serving and management system that powered DoubleClick's network.[64]

After a brief round of negotiations, Carlick and O'Connor agreed to join forces. IAN would be integrated into DoubleClick and O'Connor and Merriman would take significant ownership stakes and hold key executive positions, with O'Connor assuming the role of CEO. IAN brought to the table the technology for ad delivery, management, and reporting, while DoubleClick brought advertising industry credibility, an experienced sales force, and, most importantly, a stable of web publisher and marketer clients. As O'Connor told *Advertising Age*, "We realized we had the same goals: They had the sales and we had the technology. It was a merger made in heaven."[65]

DoubleClick officially launched its network in early 1996, having by then dropped the "WCLK" designation. Building on established business connections, DoubleClick invited high-traffic web publishers to join its network free of charge.[66] Among the first to sign on were Travelocity, USA Today Online, Quicken Financial, Macromedia, U.S. News Online, and the site for the popular Dilbert comic.[67] By August DoubleClick was courting over 100 partners, including some of the tech sector's major companies such as Microsoft and Intel and large

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[64] The "first" online ad server was reportedly developed by students at Stanford's Graduate School of Business who founded Focalink Media Services in July 1995. Dave Zinman, "The First Ad Server," September 25, 2009, http://go2market.blogspot.com/2009/09/first-ad-server.html

[65] Riedman, "Digital Media Masters: Kevin O'Connor."

[66] Amanda Lang, "Cyberspace advertising soars: Technology that tailors message for target users lures advertisers," *The Financial Post*, November 4 1997.

[67] Ed Foster, "Can mixing 'cookies' with online marketing be a recipe for heartburn?," InfoWorld, July 22, 1996, 54; DoubleClick, *1997 Annual Report*, 2.

publishers like Ziff-Davis, the *Wall Street Journal*, and the *Chicago Tribune*.[68] The network coalesced with approximately 30 participating sites.[69] Publishers entered into exclusive agreements whereby DoubleClick sold and delivered their banner ad inventory, generally splitting the revenues down the middle.[70] Early advertisers included American Airlines, Bank of America, Honda, Nissan, and Toyota.

Further extending the broadcast network model, DoubleClick packaged its websites into "vertical" content segments allowing marketers to target particular demographic groups based on their affinity for certain categories of media fare. For example, marketers could opt to reach the audiences of sites focused on business, news, and/or sports.[71] As O'Connor explained: "Think of NBC. Very rarely does NBC say here, you've got to buy the entire network. What they say is, here is a collection of very high-quality products that reach various target audiences, which shows do you want to buy? And we're very much the same way. You can think of us as the Burger King of internet advertising. We give it any way you want.[72]

Despite the efficiencies of segmentation and the network format, simply replicating the broadcast model on the web failed to address the root of marketers' concerns about online advertising. The real issue stemmed from one of marketers' most enduring problems: the "historical anxiety over whether people notice their persuasive messages, or, even more, care about them."[73] For all of the anticipation regarding interactive media's potential for hyper-efficient customer acquisition and one-to-one relationship management, marketers were simply not convinced of the effectiveness of banner advertising.

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[68] "The Burger King of internet advertising," *Interactive PR*, August 12, 1996.
[69] *Gale Encyclopedia of E-commerce* (Detroit: Gale Group, Thomson Learning, 2002), s.v. "DoubleClick."
[70] O'Connor, *The Map of Innovation*, 192.
[71] Stuart Elliott, "New in ad sales cyberspace, the Softbank Network will cover topics from sports to travel," *New York Times*, September 15, 1997.
[72] "The Burger King of internet advertising," *Interactive PR*.
[73] Turow, *The Daily You*, 36. For a detailed look at this historical anxiety, see Michael Dawson, *The Consumer Trap: Big Business Marketing in American Life* (Urbana: University of Illinois Press, 2003).

A few months after DoubleClick's launch, the trade press was already urging marketers to go "beyond the banner."[74] A novelty in 1994, by 1996 banner ads had grown increasingly pervasive and gimmicky, trends that owed in no small part to the rise of ad networks themselves.[75] As Robert McChesney et al. have pointed out, one of advertising's "core contradictions" is that the more companies advertise in order to "distinguish themselves from their competition, the more commercial clutter there is in the media and culture," reducing the efficacy of any given ad.[76] Whatever intrigue the banner format had initially possessed had begun to fade with overuse. Click-through rates began to slip downward.

A range of flashy features were implemented as part of efforts to update the basic banner format and assuage marketers' dissatisfaction. Among them were augmenting static banners with sound and animation, adding more robust interactivity such as ecommerce capabilities, and utilizing HTML frames to ensure that ads remained in the viewing area as users scrolled and navigated through sites. New banner shapes and sizes proliferated, supplementing the basic rectangle with "skyscrapers, verticals, half-sizes, and micros." One account found 242 unique banner sizes in use in October 1996.[77] Much to the disdain of web users, pop-up advertising (ads that opened up in a new browser window in front of the desired content) also proliferated during this period.[78]

Yet many of these enhancements were essentially cosmetic and their slipshod implementation only added to the disorder of the medium. More importantly, they failed to address what marketers increasingly saw as the central challenge and promise of the web,

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[74] Charles Waltner, "Going beyond the banner with web ads," *Advertising Age,* March 4, 1996, 22.; Debra Aho Williamson," Breaking free from boring banners," *Advertising Age*, April 1, 1996, 37
[75] Jeff Frentzen, "Researching the Net advertising business model," *PC Week*, April 7, 1997.
[76] Robert W. McChesney, John Bellamy Foster, Inger L. Stole, and Hannah Holleman, "The Sales Effort and Monopoly Capital," *Monthly Review*, 60, no. 11 (2009).
[77] "Number of banner sizes is increasing," *Advertising Age,* April 28, 1997, 43.
[78] Another trend that started to gain significant traction was blending editorial and advertising. This is addressed in chapter four.

"targeting ads specifically to users."[79] This kind of individual-level messaging remained out of reach, a "holy grail" for many marketers.[80] Frustrated, early adopters of online advertising such as Sony began to tighten the purse strings of their new media budgets. Of course this was not true across the board as new marketers were coming online during this period and aggregate spending was increasing steadily. But in general terms, as one ad executive put it, "the initial wave of investment for the sake of learning [was] over."[81]

Marketers began to demand more specific ad targeting capabilities, which stemmed from their long-standing desire for higher standards of audience measurement and ad performance across all media platforms. Turow has shown that the increased emphasis on quantifying advertising results was an outgrowth of systemic changes within the advertising industry beginning in the 1980s.[82] While the drive to measure advertising outcomes in increasingly precise ways began well before the advent of the web, interactive media was taken up by some as a place to advance this trend to its limits.

As such, ad networks placed targeted advertising and improved metrics at the very core of their operational goals and implemented them through the integration of *ad serving technology* into the network sales structure. This took a variety of forms, but DoubleClick's was among the most advanced. Building on IAN's software, DoubleClick developed a multi-functional system that utilized *centralized servers* to deliver *dynamically targeted* ads to sites across its network, while simultaneously gleaning information in order to *profile* web users and

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[79] Charles Waltner, "Going beyond the banner."; Debra Aho Williamson," Breaking free from boring banners."
[80] Ann Marie Kerwin, "NY Times' web site lets advertisers get personal," *Advertising Age,* July 14, 1997, 35.
[81] Debra Aho Williamson, "Sony Seeks Big-Bucks Sponsors for Web Site," *Advertising Age*, March 18, 1996, 22.
[82] Notable trends include the media buying function becoming a stand-alone component, the shift away from commission to fee-based payment systems, and accelerating audience fragmentation. Turow, *The Daily You.;* Joseph Turow, *Breaking Up America: Advertisers and the New Media World* (Chicago: University of Chicago Press, 1998).

internet domains. The service was later expanded to include *ad management* tools for reporting the performance of specific ad campaigns and implementing modifications based on the results.

DoubleClick packaged all of these functions into a centralized technology suite branded as the Dynamic Advertising Reporting and Targeting (DART) system. DART became the core of DoubleClick's business and was continuously refined and enhanced as the online ad market matured. DoubleClick described DART as a comprehensive technology that "enables advertisers to optimize ad performance by dynamically targeting and delivering ads to web users based on pre-selected criteria. As a user visits the websites of web publishers that utilize DoubleClick's solutions, DART collects information regarding the user and his or her viewing activities and ad responses, and applies this data to improve its ability to predict the user's reaction and enhance DART's ad targeting capabilities."[83] Upgrading the network format with the technological capacities of the DART system was, in O'Connor's words, DoubleClick's "big breakthrough."[84] And while the specific implementations of these functions were crude by contemporary standards, they nonetheless represented a "quantum leap forward" for the web advertising of the period.[85]

O'Connor and other company spokespersons relentlessly aggrandized DoubleClick's targeting prowess in the trade and business media. This was a common strategy during a period when public relations cache was easily translated into investment capital windfalls via the internet-crazy financial market.[86] DoubleClick used the press and its own marketing campaigns to tout its capability to "get the right advertisement to the right person at the right time,"

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[83] DoubleClick, *1998 Annual Report*, 1.
[84] Josh Zelman, "Kevin O'Connor: "The Search Is Over, Tomorrow We Start The Business, [Founder Stories]" *Tech Crunch*, August 17, 2011, [quote is from video interview], http://techcrunch.com/2011/08/17/founder-stories-kevin-oconnor-start-business/
[85] Kim Cleland, "Focalink and DoubleClick debut new technologies," *Advertising Age,* February 05, 1996, 30.
[86] This topic is addressed at length in chapter two.

promising to achieve the "ultimate in target marketing."[87] In other words, the company positioned itself as the antidote to marketers' disquiet, promising to transform the web from "dodge city" into "an advertiser's dream – a medium that could home in on individual consumers cheaply and directly."[88]

Over the next four years DoubleClick would take the lead in creating the standard ad network technology suite of centralized ad serving, dynamically targeted ad delivery, user profiling, and self-service ad management that formed the technical backbone of the emergent online advertising market. Putting these mechanisms into practice involved shepherding the web's technological development in ways that were amenable to advertising (especially in the case of HTTP cookies, discussed below) as well as intervening into the marketing complex's established political economic structure (i.e. the relations between marketers, ad industry, and publishers). It bears repeating that these processes also intimately involved the domains of public policy, public opinion, and the financial system in particular, factors addressed in subsequent chapters.

The activities of ad networks during this period are the genesis of the consumer surveillance that became the hallmark of online advertising. A nuanced understanding of this history requires unpacking the technical details of ad serving technologies, which are grounded in the basic data communication protocols of the world wide web. As Robert Bodle argues, clarification of the "relationships between technical features and their social implications" reveals how market logics have impacted the very structure of the internet.[89] While examining the particulars of something like the Hypertext Transfer Protocol (HTTP) may seem arcane, it

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[87] Randall Rothenberg, "An Advertising Power, but Just What Does DoubleClick Do?," *New York Times*, September 22, 1999; DoubleClick, "Build Relationships," [advertisement], *Adweek*, March 6, 1997.
[88] Taylor, "The repping of the Web."; Judith Messina, "Kevin O'Connor and the mouse that roared," *Crain's New York Business*, May 15, 2000, 30.
[89] Robert Bodle, "Regimes of sharing," *Information, Communication & Society*, 14, no. 3 (2011), 323.

provides an essential vantage point for apprehending the web's transformation into an advertising channel and lays bare the unique characteristics of that transformation. As I hope to illustrate, the technology matters quite a bit. Fleshing out the details requires a closer look into processes of computer networking and web serving.

Decentralized Web Protocols, Centralized Ad Systems

The files that make up websites are stored on internet-connected machines called web servers. Publishers such as *FastCompany.com* would generally host the text, media, and organizing information that constituted its website content on one or more proprietary web servers. In the early days of online banner advertising circa 1994, *Fast Company's* servers would also host any ads displayed on its site, which were designed either in-house or by an outside ad agency representing a marketer client. Even in scenarios in which a repping firm like Poppe Tyson sold ad space on a publisher's behalf, the publisher itself would be still charged with hosting and delivering the ads using its own web servers. Publishers that sold their own ad inventory would manage their own accounts and provide limited metrics such as aggregate impressions and click-throughs.

DoubleClick's ad network model essentially transferred all of these functions (ad sales, hosting, delivery, campaign management, and reporting) from publishers to the network firm itself. Thus, in addition to selling ad space on behalf of publishers within its network, DoubleClick hosted their ads on its own servers and assumed control of delivery, management, and reporting. This division of labor was technically possible because of the characteristics of web-based data transmission.

In order to access a given website a user must connect to the hosting server using a "client."[90] During this period the most common clients were web browsers developed by Netscape (first Mosaic, then Navigator) and Microsoft (Internet Explorer). Web communication is facilitated by a method of data connection called Hypertext Transfer Protocol (HTTP), through which clients and servers issue requests and responses for various site components.[91] Behind the scenes, a website that appears to load as a unified entity is actually an amalgamation of various media elements assembled by the browser client according the parameters laid out in the hypertext markup language (HTML) that underpins all web pages. All but the most basic pages are normally constituted via multiple client/server requests and receptions of HTML files, media files, scripts, and/or other site components, including banner advertisements. Further, HTTP requests are all treated as discrete communication events between the server and client, making the web a "stateless system." This concept is important for the discussion ahead pertaining to HTTP cookies and user profiling.

In a basic configuration, a client would receive all the files that make up a given web page from a single server, but this does not necessarily have to be the case.[92] Different website elements can be hosted on multiple servers with no readily apparent change in the final display or functionality.[93] This ability of browsers to seamlessly render multisource documents via HTTP is one of the technical features that made possible the often-celebrated decentralized

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[90] Tim Berners-Lee, Robert Cailliau, Ari Luotonen, Henrik Frystyk Nielsen, and Arthur Secret, "The World Wide Web," *Communications of the ACM*, 37, no. 8. (1994), 76. Often client connections to web servers are processed through intermediaries such as web proxies and/or firewalls.

[91] HTTP is defined as "a platform-independent, client/server protocol defined for any packet-switched digital network that supports the lower-level TCP/IP protocol suite." A client locates a server via a uniform resource locator (URL) and asks it (often using 'GET requests') to send the associated files. If the files are available and the client has sufficient permissions to access them, the server responds. The DNS system is an intermediary, but not germane to this discussion. Hal Berghel, "Caustic Cookies," *Communications of the ACM*, 44, no. 5, (2001), 19-22.

[92] Berners-Lee et al., "The World Wide Web."

[93] Although connection speeds can cause multi-sourced HTML pages to load different elements at different speeds, this has been somewhat "solved" by broadband internet connections.

structure of the web.[94] Ironically, it also enabled the much less renowned proliferation of the centralized delivery of online advertisements. In this way, the developing model of online advertising was a microcosm of changes in global capitalism, whereby information and communication technologies facilitated increasingly decentralized international production and consumer markets while at the same time enhancing concentrated and "flexible" administrative control.

Capitalizing on the affordances of the web communication protocols, ad networks were able to offer publishers and advertisers fully outsourced ad delivery and management services by hosting and delivering ads to a number of sites from their own centralized servers. Thus, when *Fast Company* joined DoubleClick's network in 1996 it contracted out not only its ad sales operation, but also its ad delivery and associated processes of inventory management. This redirect was technically simple to achieve and had the added benefit of operating behind the scenes, i.e. undetectable to the majority of end users. Configuration simply required the inclusion of instructions in *Fast Company's* HTML documents to retrieve banner ads from DoubleClick, rather than its own server. The process is represented in figure 1.

[94] Nicholas Negroponte, *Being Digital* (New York: Knopf, 1995).

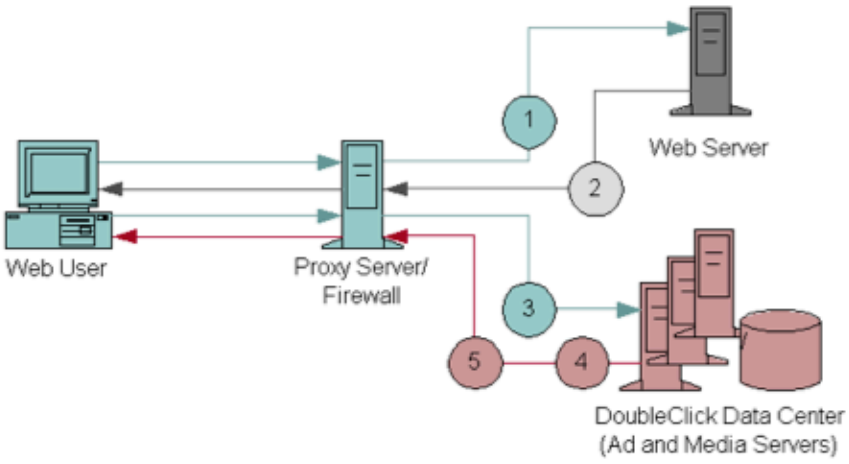

FIGURE: How DART serves ads

Stage	Description
1	The user requests an HTML page.
2	The Web server sends the user an HTML document.
3	The user's browser reads the HTML code and sends a request to `http://ad.doubleclick.net` for an ad.
4	The DoubleClick ad server chooses an ad and counts an impression.
5	The ad server, a media server, or a third-party redirect server serves the ad.

Figure 1. DoubleClick's ad serving process.
Source: DoubleClick, *DART White Paper: Counting Methodologies*, July 12, 2001, 2.

This service proved attractive to web publishers who wished to sell ad space but were not able to take on the wide range of accompanying business responsibilities. As an executive at the financial services site Edgar Online told the *New York Times*, working with DoubleClick "allows us to focus on what we're good at, the selling and marketing of S.E.C.-based products, but not on what we're not good at – dealing with ad agencies, trafficking ads, and sending advertisers

reports."[95] As will be demonstrated, centralized ad serving laid the foundation for more advanced practices of "database marketing" and "simplified tracking creative."[96]

The Reciprocity of the Web: Protocols, Data Collection, and Ad Targeting

DoubleClick extended this centralized distribution model over its entire network, utilizing its own DART servers to house and deliver many different ads to many different websites. Yet centralized delivery alone was insufficient for one-to-one ad targeting, which necessitates knowing information about audiences, or better yet, individuals. In order to better approximate this kind of customization, ad networks took advantage of the multi-directional nature of web server/client communication. While the principal use of web servers was to host and distribute information, they could also be configured to collect it. Leveraging this reciprocity, DoubleClick turned its ad delivery network into a distributed apparatus for gathering information about web users and their behaviors.

Since the ads delivered by DoubleClick were centrally hosted on its own servers, the company established HTTP connections with every browser that accessed any of the sites in its network. For example, when a user visited *Fast Company's* site, her browser sent requests to *Fast Company* servers that returned the magazine's online content while also directing the browser to DoubleClick servers in order to retrieve banner ads. Thus, accessing *Fast Company's* site established a connection not only between the client and *Fast Company*, but also between the client and DoubleClick. This relationship extended to all sites in DoubleClick's network, enabling it to capture and analyze a range of data, which it then deployed as the foundation of the DART ad targeting system.

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[95] Rothenberg, "An Advertising Power." It is also worth noting that Edgar Online is itself a privatized operator of what had formerly been a state function.

[96] Jennifer Gilbert, "Agencies centralize web ad serving," *Advertising Age,* March 1, 1999.

DoubleClick assembled databases of targeting information through what it called the "Derive Profiles Process" (DPP).[97] The DPP constructed profiles of users' web clients and internet domains in order to determine which ads to display across the network. Roughly, web client profiles provided information about when, where, and from what device users accessed a given site, while domain profiles gave information about the type of internet access. From these basic information sources, a broad range of data could then be extrapolated. As O'Connor put it, "building an accurate and comprehensive user and domain profiles database is fundamental to targeted advertising with DoubleClick."[98] The company gathered profile information from three main sources: *protocol-based data* derived from the standard information passed between web clients and servers in HTTP transactions, *third-party data* purchased from external companies, and *tracking data* gathered by depositing HTTP cookie files onto the machines of users visiting sites in its network.

Protocol-based data: All HTTP requests contain standard components, including various "headers" that define the parameters of the transaction and provide meta-data about the client making the request. In this way HTTP allows site administrators to learn a bit about their visitors. For example, standard web page requests include headers that contain information describing the client's computer operating system and browser (User-agent header), acceptable languages for display (Accept-language header), and the date and time the request was sent. Stored in files called server logs, this information was useful to web administrators who wanted to accommodate the variance among the capabilities of different browsers or perform basic analysis of traffic patterns.

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[97] O'Connor, *The Map of Innovation*, 206.
[98] O'Connor, *The Map of Innovation*, 203.

HTTP requests also include the client's internet protocol (IP) address, which uniquely identifies a specific computer on a network.[99] IP addresses are assigned to clients by internet service providers (ISPs), which are allocated inventories of addresses by regional internet registry organizations such as the American Registry of Internet Numbers (ARIN). Such registry organizations publish IP address directories that can contain certain identifying information. For example, ranges of addresses are often assigned to particular geographic locations. Using this information, IP addresses can be used to determine users' internet domains and to approximate their geographic location. For example, a user accessing the web from an internet connection supplied by a university or employer uses a client with an IP address that is associated with a respective domain such as Illinois.edu or Intel.com. Similarly, a user on a private internet connection is assigned an IP address that is traceable to her specific internet service provider. As I write, my internet connection uses the IP address "108.199.241.68," which is associated with the ISP domain host "108-199-241-68.lightspeed.dctril.sbcglobal.net." A publicly available online directory indicates that my IP address is traceable to an AT&T internet service provider (AT&T is the parent company of SBC Global) located in Decatur, IL, about 55 miles from my workspace in Urbana.[100]

Third-party data: A considerable amount of information can be inferred using only approximations of ISP domains and geographic locations. As O'Connor explained, the IP address passed on by browsers "tells you a lot," especially when "integrated with third party

[99] HTTP proxies complicate this, but this issue can be bracketed here. "If you use an HTTP proxy, the web site will "see" the proxy's IP address, not your computer's. Thus all of the proxy's users will appear to be one user to a server. If you use an ISP that provides you with a temporary IP address each time you connect to it, your IP address could be different when you visit example.com at different times, and you would appear to the server as different users." This configuration of user access was furthered as broadband access replaced dial-up in many areas. David M. Kristol, "HTTP Cookies: Standards, Privacy, and Politics," *ACM Transactions on Internet Technology*, 1, no. 2, (2001), 155-6.

[100] Domain Tools, My IP Service, http://www.domaintools.com/research/my-ip/

data" from consumer marketing lists and census records.[101] Companies such as Digital Envoy sold access to proprietary IP address location databases, which were compiled by combining public data sets with information gathered from various forms of web traffic analysis.[102] Building on third party data providers, DoubleClick constructed its own database of ISP domain profiles. Expanding beyond geographic information, the company compiled detailed domain records by marrying "ZIP codes with census data to create demographic profiles" and overlaying data on "Fortune 500 companies and their industries" such as revenue, number of employees, and industry classification codes (OSHA SIC).[103] In this way DoubleClick was able to make ad serving decisions based on the pre-existing domain profile that most closely matched the IP address information of incoming browser requests. Each new request was added to DoubleClick's domain name database, which after just 9 months included some 70,000 institutional records and by 1998 grew to 500,000.[104]

Pairing the full range of HTTP header and IP address (domain profile) information and external data with the content of specific sites allowed DoubleClick to *dynamically target* ads in ways that most marketers, let alone users, thought impossible in 1996. New methods were employed such that two visitors to the same website – one in Schenectady using a Macintosh machine on a local dial-up ISP and another in Silicon Valley using Windows on their employer's network connection – might receive entirely different banner ads based on the meta-data generated from their browsing activities. When asked whether DoubleClick could "enable an

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[101] "The Burger King of internet advertising," *Interactive PR*. Third party data is explored further in chapter four.
[102] One method was to compare unknown IP addresses to "known locations of other electronically neighboring servers and routers." Andrew Turner. "Geolocation by IP Address," *Linux Journal*, October 25, 2004, http://www.linuxjournal.com/article/7856; "Geolocation: Don't Fence Web In," *Wired*, July 12, 2004, http://www.wired.com/techbiz/it/news/2004/07/64178?currentPage=1
[103] "Geolocation: Don't Fence Web In," *Wired;* O'Connor, *The Map of Innovation*, 194.
[104] Zina Moukheiber, "DoubleClick is watching you," *Forbes*, November 4, 1996; DoubleClick, "Ad Info / Ad Targeting / Banner Delivery," archive captured February 5, 1998, http://web.archive.org/web/19980205041517/http://www.doubleclick.net/nf/adinfo/bandeset.htm

advertiser to reach, for example, only women aerospace engineers who like sports in Southern California," O'Connor responded, "If you worked for Lockheed [Martin] in Orange County and you're accessing the sports scores for women's soccer [on a site within DoubleClick network], we've got you."[105]

What made the process "dynamic" was that the targeting was automated and executed in real time. This meant that DART could deliver individually targeted ads on the fly by consulting its profile database to determine the appropriate ad to send in any given instance. This process of dynamic targeting would become the prototypical form of online advertising and, as will be shown, highly dependent upon increasingly pervasive data collection. For marketers and publishers, these kinds of dynamic targeting applications offered a dramatic improvement over earlier, more static methods of ad placement. First generation banner ads circa late 1994 and 1995 were clickable, but still fixed in the sense that they ran in particular locations for set durations.[106] Like billboards on the interstate, the placement and design of most banners remained unchanged throughout their campaigns, which often spanned weeks or months.

Tracking data: Improvements notwithstanding, protocol-based dynamic targeting was still based on rough inferences made from header and IP address data. The major technical breakthrough for online advertising came from the integration of HTTP cookies, which greatly increased the granularity and precision of profiling, targeting, and management and made available new forms of persistent profile data based on recorded user behavior, rather than inference. According to Turow, cookies "would do more to shape advertising…on the web than any other invention apart from the browser."[107] Moreover, the widespread appropriation of

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[105] "The Burger King of internet advertising," *Interactive PR*.
[106] Casey Kait and Stephen Weiss, *Digital Hustlers: Living large and falling hard in Silicon Alley* (New York: Regan, 2001), 119.
[107] Turow, *The Daily You*, 47.

cookies by ad networks and publishers altered the technical composition of the web itself by introducing a new level of persistence, and thus a capacity for consumer surveillance, into a formerly discrete, or "stateless," communication environment.

In order to maximize efficiency, HTTP was designed as a "stateless" protocol, meaning that all communication transactions are treated as discrete events.[108] A relationship exists between the client and server "only for the duration of a [given] transaction, and each transaction stands alone."[109] The basic steps of an HTTP transaction are as follows:

1. Client connects to a server;
2. Client makes a request of the server;
3. Server fulfills the request for the client;
4. The connection is closed.[110]

Statelessness results from the fourth step, which disconnects the client and server at the end of every transaction. Thus, the server engages every HTTP request as a freestanding event independent of all others, rather than as part of an extended session of activity.[111] Entering a web address into a browser initiates a discrete set of transactions. Clicking on a link initiates another, and so on. In other words, no enduring "state" is maintained between client and server beyond the scope of individual data transactions.

This presented a challenge for website administrators who wanted to quantify and analyze page traffic beyond the information contained in headers. Most web servers were configured to automatically record certain details about their activities in server log files, but

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[108] Berners-Lee et al., "The World Wide Web," 78.
[109] Mark Gibbs, "Cookies: Feeding session information from Web servers to clients, and back," *Network World*, January 20, 1997.
[110] Adapted from Berghel, "Caustic Cookies," 19-22.
[111] Ariel Poler, "Advertising on the Web," in *Architects of the Web: 1,000 Days that Built the Future of Business*, ed. Robert Reid (New York: Wiley, 1997), 217.

these contained separate entries for each HTTP request; every HTML page, every image, every file request generated a unique line in the server log. The problem was in stringing these discrete transactions together. The basic statelessness of HTTP made it nearly impossible to accurately determine whether any given series of requests represented the activity of one or multiple users. Early online audience measurement companies such as I/PRO attempted to dissect the contents of server logs to glean information about web traffic patterns. Some degree of analysis was possible using IP addresses and the information contained in "Referer" [sic] headers, which show the URL of the previous page from which a link to the current page was followed.[112] But as I/PRO's founder explained, although log files held "an immensely rich trove of information," they were "ungainly veins."[113]

While I/PRO achieved some success matching IP addresses with third party data sources, the company was never able to reliably divine the activities of individual users ("unique visitors") without forcing people to register on given websites.[114] For most, server logs presented only "flurries of unrelated [HTTP] queries."[115] The major innovation pioneered by DoubleClick and other ad networks was to appropriate the web technology of the HTTP cookie to effectively tie together otherwise overwhelming and incongruent streams of server log data. A simple and flexible mechanism for bringing "state" to the web, cookies were deployed by ad networks and publishers to persistently track user behavior in order to build individual profiles for targeted advertising.

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[112] Practices such as dynamically assigned IP addressing and web proxy serving generally render IP addresses insufficient for identifying unique users. The usefulness of "Referer" headers for analyzing web traffic is dampened because they only go back one step and do not work for direct links. The word "referrer" was misspelled in the original header specification and has remained so in subsequent implementations.
[113] Poler, "Advertising on the Web," 217.
[114] Efforts to get users to register were ongoing in this period, though largely unsuccessful due to the prevalence of alternative sites that did not require registration.
[115] Thomas E. Weber, "The Man Who Baked The First Web Cookies Chews Over Their Fate," *Wall Street Journal*, February 28, 2000.

HTTP Cookies and Ad Networks

The original specification for "persistent client state HTTP cookies" was created at Netscape by Lou Montulli, one of the company's first software engineers.[116] Broadly conceived, cookies were created as a means to solve a set of problems that statelessness posed for conducting business online.[117] Common features of contemporary websites such as retaining user preferences and account information between pages or visits were difficult to implement under the stateless web protocols. As David Kristol explains, "Statelessness makes it easier to build web browsers and servers, but it makes some web applications harder to write."[118] Though Netscape's primarily focus was not building web business applications at the time, Rajiv Shah and Jay Kesan have shown that the company's "need to generate revenue influenced the motivations and goals of its developers and led to an emphasis on features supporting commerce."[119] In mid-1994, Montulli led the team that created cookies as part of a contract to build an online shopping cart application that required a persistent connection between clients and servers.

The typical HTTP configuration did not allow for a shopping cart that could retain items from one web page to the next. Imagine a store where shoppers can select only one item at a time and must check out before purchasing something else. As the *Wall Street Journal* put it, websites of the period "made poor shopkeepers." [120] The challenge was to enable sites to see "users as distinct individuals so that [they] could remember things about them."[121] Existing fixes to these

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[116] Cookies were named in homage to the early days of networked computing. "When machines passed little bits of code back and forth for such purposes as identification, early programmers called the exchanged data 'magic cookies.'" John Schwartz, "Giving Web a Memory Cost Its Users Privacy," *The New York Times,* September 4, 2001.
[117] Netscape Communications, "Persistent Client State HTTP Cookies," archive captured October 27, 1996, http://web.archive.org/web/19961027104920/http://www3.netscape.com/newsref/std/cookie_spec.html
[118] Kristol, "HTTP Cookies," 152.
[119] Rajiv C. Shah and Jay P. Kesan, "Recipes for cookies: How institutions shape communication technologies," *New Media & Society*, 11, no. 3 (2009), 321.
[120] Weber, "The Man Who Baked The First Web Cookies."
[121] Weber, "The Man Who Baked The First Web Cookies."

obstacles were cumbersome, unsecure, and often unable to withstand the use of the browser's "back" button.[122] Moreover, many solutions were session-based, meaning that they were only valid for the duration of a single, uninterrupted visit.[123] Montulli's elegant breakthrough was to implement a method for preserving state on the client side of the transaction rather than the server side. In other words, instead of burdening web servers with the messy task of maintaining persistent connections with multiple clients, Montulli's solution recorded and preserved state information on the client's system using a small text file: the HTTP cookie.

Upon visiting a cookie-enabled site for the first time, a client would be prompted by the server to create a cookie file containing a unique identifier. As the client then interacted with sites hosted by the server, the cookie would be updated to reflect the actions of the user. Each time the client made requests of the server, it would also send along all of the current information stored in its cookie file, enabling the server to "recognize" the client and effectively maintaining a persistent state of communication. Translation: "With a cookie, a web server essentially says: Here, hang on to this file and show it to me the next time you ask me something. It will remind me who you are and what we've already talked about."[124]

Cookies were technically implemented by introducing a new set of headers to the HTTP transactions between servers and clients. A "Set-Cookie" header sent by the server deposits the cookie text file on the client's system. This file contains three basic components that together make it possible to maintain persistent communication despite the discrete nature of individual HTTP requests.[125] The first is an identifier code that corresponds uniquely to the client upon which the cookie resides. Note that this code uniquely identifies a web client only. In cases

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[122] Ibid. Also Shah and Kesan, "Recipes for cookies," 321-322; Kristol, "HTTP Cookies," 155. Examples of less elegant solutions: shopping cart information was appended to URL strings or stored in hidden HTML fields.
[123] "Enabling technologies," *Upside*, February 1997, 106.
[124] Weber, "The Man Who Baked The First Web Cookies."
[125] Berghel, "Caustic Cookies," 19-22.

where web clients are shared among multiple users, a cookie does not contain information corresponding to the actions of a single person.[126] The second component specifies information about the cookie's source and delimits the range of servers that can access it in the future. The third is an open-ended field for storing various types of state information such as shopping cart items and user preferences. Cookies may also contain other variables such as expiration limits, which can range from days to years to indefinitely.

The link between a cookie's unique identifier and its originating web server is what makes persistence possible. When a client accesses a site for the first time, the server sets a cookie on the client's system. After this initial connection, the client then sends along the uniquely identified cookie's updated information as part of all subsequent communication with corresponding servers. Here is a simple cookie/shopping cart example:

1. User visits a cookie-enabled site (shopping.com) for the first time.

2. Responding to the client request, the shopping.com server also sets a cookie, which includes the identifier "ID-123" and specifies that the cookie may be accessed by all sites and pages that fall within the shopping.com domain. For example, a site might have a number of component sites under its top-level domain (shopping.com) such as sports.shopping.com and kids.shopping.com.

Example cookie set by shopping.com:

[HTTP header]	[unique identifier]	[domain specification]
Set-Cookie	Name=ID-123	Domain=shopping.com

3. User clicks to add "item1" to the shopping cart and the client sends its cookie identifier along with the request.

[126] Even when a client is used by only one individual, a standard cookie stores no personally identifiable information that has not been volunteered. Despite the technical anonymity of cookies, understanding their implications for user privacy requires a nuanced analysis, taken up in chapters four and five.

> 4. Responding, the server instructs the client to append cookie "ID-123" with state information that designates that "item1" has been placed in the cart. Usually this information takes the form of a short character string that occupies a single line in the cookie file, coded such that only the host server can decipher it.[127]

The appended cookie now contains:

[HTTP header]	[unique identifier]	[domain specification]	[state information]
Set-Cookie	Name=ID-123	Domain=shopping.com	State Info=item1

> 5. Now, if the user navigates to another page on the site (shopping.com/page2), the cookie information is again sent as part of the URL request. Shopping.com's server apprehends that cookie "ID-123" contains "item1" in its shopping cart and loads "shopping.com/page2" with the appropriate item populated in the cart. Note that the client only sends the cookie because the URL "shopping.com/page2" falls within the domain range specified in the original cookie. This "domain-matching" component of the cookie specification was intended to limit the use of cookies to the primary website that a user was visiting.

Despite the discrete nature of the many HTTP connections occurring in this scenario, state information persists because the uniquely identified cookie file is amended as needed and sent back and forth between client and server as part of the basic process of HTTP communication. Moreover, state is maintained as long as a non-expired cookie exists on the client machine, even if the user visits other sites in the meantime.

Support for cookies was integrated into Netscape's Navigator 0.94, released in November 1994 to succeed earlier versions of its Mosaic browser. Concurrently, Netscape posted a "preliminary specification" document on its website that described cookie implementation for web administrators and developers.[128] Apart from this document, Netscape publicized cookies very little after initial release.[129] Nevertheless, hundreds of websites began experimenting with them upon their incorporation into the popular Navigator browser.[130] Microsoft too played an

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[127] Shawn P. McCarthy, "How to serve up cookies to your Web site visitors," *Logistics Management*, January 1997, 70.
[128] Netscape Communications, "Persistent Client State HTTP Cookies."
[129] Gibbs, "Cookies: Feeding session information."; Shah and Kesan, "Recipes for cookies," 322.
[130] Shah and Kesan, "Recipes for cookies," 324.

important role in the diffusion of cookies, as it was one of the first major companies to use them to retain user preferences on its own website in 1995.[131] More importantly, when developing the Internet Explorer browser to compete with Navigator, Microsoft included support for cookies as a "no brainer," effectively solidifying their position as a common web development tool.[132] By January 1997, *Network World* described cookies as "a de facto standard" of online commerce.[133]

Cookies were deployed in a variety of capacities such as the shopping cart application in the above example, but also to preserve user preferences and account information and, increasingly, to help measure website traffic. As Montulli noted in the original specification, "This simple mechanism provides a powerful new tool which enables a host of new types of applications to be written for web-based environments."[134] Montulli envisioned Netscape's role as building an "infrastructure for the web" that "would be useful for the entire community."[135] As he later told *The New York Times*, the goal was to create a tool with the flexibility to be put to many different uses, including "things we hadn't thought about."[136]

It is important to stress that cookie functionality was embedded into the standard method for serving web pages (the HTTP header mechanism). Regardless of the source, the "Set-Cookie" header could be added to any server communication. As noted earlier, web pages are multi-source documents that routinely contain components originating from multiple servers. This created a technical "loophole" whereby "third parties" could deposit cookies through websites for which they were not the primary hosts, provided that they served some component

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[131] "What's on-line," *The Houston Chronicle*, December 10, 1995.
[132] John Schwartz, "Giving Web a Memory."
[133] Gibbs, "Cookies: Feeding session information."
[134] Netscape Communications, "Persistent Client State HTTP Cookies."
[135] Weber, "The Man Who Baked The First Web Cookies."
[136] John Schwartz, "Giving Web a Memory."

of the page.[137] Any component would do, whether a media file, an application like a hit-counter, or a banner advertisement.

DoubleClick capitalized on this opportunity, shrewdly including the "Set-Cookie" header with each banner ad it served, regardless of the site upon which it appeared. This created and maintained a state relationship between DoubleClick and the clients that visited *any of the sites within its network*. Dispersed across the web through ad networks' centralized delivery systems, banner ads became conduits for distributing cookies on a scale and scope that far exceeded anything in practice at the time (and went well beyond the expectations of Montulli and Netscape).[138] Most significantly, the appropriation of cookies gave ad network companies an entrée to develop greatly improved user tracking and profiling capabilities. It also gave large ad networks like DoubleClick leverage in the form of "network effects," whereby building bigger networks, setting more cookies, and capturing more data increased DoubleClick's market power and the value of its services for advertisers.

Cookies could be configured to act not only as bridges, preserving connections between clients and servers, but also as cameras of sorts, recording details about users' behavior as they browsed the web. It is difficult to discern precisely which ad network company was the first to use cookies in this manner.[139] What is clear is that throughout 1996 DoubleClick and a group of competitors integrated cookies into their the heart of their ad serving systems in order to compile databases of user profiles and deliver targeted ad messages in real time. In addition, cookies were

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[137] Shah and Kesan, "Recipes for cookies," 325.

[138] The importance of early interactions between Netscape and DoubleClick are often overlooked. Netscape hired DoubleClick to sell ad inventory on its website. The deal spawned one of the first successful web banner campaigns and launched DoubleClick's ad repping business. Netscape also developed the cookie, the use of which DoubleClick pioneered for online advertising.

[139] There is an important narrative to be told about the specifics of ad networks' appropriation of cookies, much of which fits into the larger political battles over online privacy among government institutions, public advocacy groups, internet standards organizations, and trade group coalitions of marketers, publishers, and the ad industry. I would like to pursue this in subsequent research.

deployed to refine back-end processes of ad management, including campaign testing and reporting.

In the hands of ad network developers, cookies added an unprecedented level of granularity to existing targeting and profiling techniques, accelerating the scope and sophistication online advertising far beyond the more common use of protocol-based HTTP header and IP address data. The regularly updated state information stored in cookie files provided the secret sauce with which to build user profile databases, effectively enabling individual-level surveillance of web clients as a proxy for consumers.[140] State information such as browsing behavior and ad frequency tallies were collected on the fly and merged with protocol-based data to build detailed profiles, which were in turn integrated into automated ad targeting processes.

When a client accessed a DoubleClick network site for the first time, the DoubleClick ad server instructed the client to create a cookie, while sending an ad based upon the client's HTTP header and IP address information. If the client already had a cookie from a previous visit to any DoubleClick site, it would send the cookie's unique ID as part of its request for the DoubleClick-hosted ad and DoubleClick's server would match it to a central database profile. This profile would then factor into the automated process that determined which ad would be sent to the client. DoubleClick boasted that all of this happened in "milliseconds."[141] At the time it was the leading company developing this capacity. As *Crain's New York Business* observed, "No one else [was] doing it in nearly as sophisticated a fashion."[142]

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[140] Again, individual-level surveillance does not imply the collection of personally identifiable information, nor does it preclude it.
[141] DoubleClick, *1998 Annual Report*, 2.
[142] Judith Messina, "New Media's Hot Play: DoubleClick Infusion Largest Ever in City," *Crain's New York Business,* June 16, 1997.

While some scrutiny of browsing history was possible via server logs, cookies enabled much more refined tracking of users from site to site, or what became known as "clickstream" analysis. Cookies recorded each time a client visited any site within a given ad network. When used in combination with server logs, cookies allowed ad networks to compile detailed browsing histories that included information about the time, duration, and order of sites visited. This was possible because cookies persisted on clients' machines over time. As such, cookies mitigated the inaccuracies that plagued other basic methods of tracking browser activity while remaining simpler to implement than available alternatives.[143]

Tied to unique cookie IDs, clickstreams provided much greater insights into online consumer behavior. It was the difference between knowing whether a given click on an advertisement represented the activity of a non-specified web user or that of a particular client that was linked to one or more consumer profiles. In cases where profiles contained browsing histories, marketers were able to see the specific routes that brought consumers to their sites. The change was subtle but significant, as marketers increasingly focused on knowing as much as possible about their customers in order to encourage repeat business. This was the "renewal of an old idea," the "80-20 rule," which held that 20% of a merchant's customers generate 80% of sales.[144]

Moreover, click-streams were integrated into user profiles, adding layers of behavioral tracking data to protocol-based and third-party data. As *Forbes* explained, after receiving an initial DoubleClick cookie "whenever you visit any of the sites [in the network], the DoubleClick server picks up the [cookie] ID number and tucks away information about your visit. Gradually it

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[143] Additionally, ad networks used a tracking technology called "web bugs," often in conjunction with cookies. Stefanie Olsen, "Nearly undetectable tracking device raises concern," *CNET News*, July 12, 2000, http://news.cnet.com/Nearly-undetectable-tracking-device-raises-concern/2100-1017_3-243077.html?tag=mncol

[144] Joseph Turow, *Niche Envy: Marketing Discrimination in the Digital Age* (Cambridge: MIT Press, 2006), 66-67.

builds a pretty complete dossier on you – and your spending and computing habits."[145] No company was more aggressive towards profiling than DoubleClick, which in its first year of operation deposited some 40 million cookies and compiled a database containing 10 million unique user profiles.[146] To get a sense of scale, the size of DoubleClick's database was 60% larger than the entire subscriber base of America Online, at the time the nation's largest internet service provider.[147]

Beyond clickstream analysis, the open-ended nature of the state information storable in cookie files allowed for novel customizations by ad networks. For example, DoubleClick established the technique of using cookies to track the frequency of displayed ads. Via a service called "Click Boosters," the company tallied the number of times users were exposed to particular ads and included this information in their profiles.[148] After a set of number of impressions, ads that were not clicked on were swapped out for fresh ones. Marketers could set the limit themselves, although DoubleClick recommended a threshold of three exposures. "After the third time, you're wasting your money," said O'Connor. "It's banner burnout."[149]

Although web publishers represented its primary client base, DoubleClick did not limit its services to the supply-side of the advertising market. Ad serving technologies could also be applied to various *ad management* functions such as ad buying, testing, and reporting. DoubleClick and others began to offer marketers and their agencies suites of self-service tools for buying and managing ad campaigns across their networks, allowing them to "select types of user and domain profiles to target, select website profiles, control sites used, and set impressions

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[145] Moukheiber, "DoubleClick is watching you."
[146] Kristi Coale, "DoubleClick Tries to Force Hand into Cookie Jar," *Wired*, March 17, 1997. http://www.wired.com/science/discoveries/news/1997/03/2615
[147] American Online, *1996 Annual Report* [10-K].
[148] Thomas E. Weber, "New Software Helps Advertisers Get Through Tangled Web Pages," *Wall Street Journal*, October 23, 1996.
[149] Moukheiber, "DoubleClick is watching you."

desired."[150] To assist with media buying, DoubleClick offered an "Editorial Targeting" service that would place ads adjacent to specific types of content. Scanning websites to track "themes and keywords, the editorial targeting system assures that ad content matches editorial content," explained *Advertising Age*. "Travel marketers, for instance, might want to appear on pages where words like 'vacation' or 'leisure' appear."[151] Likewise, an airline "could buy an ad banner on a page carrying a story about air travel to London, but not about crashes."[152]

Additionally, DoubleClick's "TestIt" service allowed marketers to "test the effectiveness of the creative content of an advertisement before launching an ad campaign by comparing click-through rates of alternative" versions.[153] This kind of live testing was faster and less expensive than anything previously possible on the web, let alone traditional media. But perhaps the most important ad management service offering was DART's "daily online performance reporting" that allowed "advertisers and web publishers to actively monitor and react to the success of particular ads, marketing campaigns, and website traffic patterns, respectively."[154] These reports were attempts to mitigate marketer discontent and confusion regarding audience and ad performance measurement.

Although plenty of skepticism remained regarding ad networks and online advertising in general, DoubleClick's targeting capabilities began to attract a growing stable of marketers and publishers. Seeking a precise online campaign, manufacturing conglomerate 3M hired DoubleClick to place targeted ads for a $10,000 state-of-the-art video projector.[155] Understanding the limited the consumer market for the product, DoubleClick used HTTP header

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[150] O'Connor, *The Map of Innovation*, 203-206.
[151] Jane Hodges, "DoubleClick adds 'Power Brands' to Network," *Advertising Age,* December 9, 1996.
[152] Debra Aho Williamson, The Net Gets Nosy," *Advertising Age* November 18, 1996.
[153] DoubleClick, *1998 Annual Report*, 2.
[154] DoubleClick, *1998 Annual Report*, 2.
[155] Moukheiber, "DoubleClick is watching you."

and IP address (domain profile) information to show the ads only to people using the Unix operating system (generally favored by advanced users) and to those accessing the web from ISPs most likely to serve potential buyers, such as advertising agencies and technology companies. It also used cookies to create profiles of the users that saw the ad and to track display frequency, never showing it to any single user more than three times. Prior to the campaign, 3M used forms on its website to generate leads for the projector, which reportedly generated some 10 to 15 responses per week. According to DoubleClick promotional materials, DART's targeted advertising campaign boosted that figure to 460 leads per week.[156]

In late 1996 DoubleClick signed an exclusive contract with the search engine/web portal AltaVista, at the time one the most popular sites on the web, garnering 24 million visits a day.[157] Prior to aligning with DoubleClick, AltaVista had been the only remaining major portal site without advertising, but the allure of ad dollars and the need for revenues compelled management to enter the market. The partnership proved fruitful for both companies in short order. Nine months after joining DoubleClick's network, AltaVista's third-quarter ad revenue "jumped to $4.5 million, up 65% from the second quarter."[158] The arrangement was even more important for DoubleClick in that AltaVista came to account for some 45% of its total revenue in 1997.[159] In addition to being a financial boon to both companies, their partnership provided "further credibility" to the online ad network business model and helped to cement DoubleClick's position as the sector's flagship company.[160] As one analyst told the Wall Street Journal, "your network is only as good as your prime-time lineup. If you were to compare

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[156] DoubleClick, "Dynamically Targeted Advertising," [advertisement], *Adweek*, March 6, 1997.
[157] Sally Goll Beatty, "Digital Equipment's AltaVista Becomes Fair Game for Advertisers," *Wall Street Journal*, December 18, 1996. Note that "visits" represent HTTP requests, not individual users, but AltaVista was very popular in any case.
[158] Lang, "Cyberspace advertising soars."
[159] DoubleClick, *1997 Annual Report*, 2-3.
[160] Beatty, "Digital Equipment's AltaVista."

DoubleClick to a fledgling online version of say, NBC, AltaVista gives them a Seinfeld, which they haven't had before."[161]

Conclusion

By late 1997, some 800 marketers had used DoubleClick's services.[162] The company was serving approximately 750 million ads per month and capacity was growing.[163] A raft of competitors emerged to offer various iterations of the network sales structure, centralized ad serving, dynamically targeted ad delivery, user profiling, and self-service ad management. Among the most important of this group were NetGravity and Accipiter, which provided "turn-key" ad management solutions to web publishers that wanted advanced targeting and reporting capabilities but did not wish to outsource ad sales or bundle their inventory in a network alongside competing sites.[164] Dozens of smaller ad networks began to enter the market as well. Web rep firm Softbank Interactive Marketing formed a network to compete with DoubleClick's stable of premium publishers, while start-up Clickhouse focused on packaging websites around tightly focused niches.[165] Newspaper publishers too attempted to enter the space by establishing the New Century Network, a collaborative effort of over 100 affiliates to bundle inventory across their websites and sell national advertising on a unified portal.[166]

While some leading publishers such as Microsoft and the *New York Times* kept ad services largely in-house, Forrester Research declared that "the future of web advertising belonged to ad networks rather than single websites."[167] Though outstanding disputes remained over important issues such as audience measurement standards, the services provided by ad

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[161] Beatty, "Digital Equipment's AltaVista."
[162] "Double Click Short Term Buy," *Standard & Poor's Emerging & Special Situation*, January 15, 1998, 24.
[163] "Double Click Short Term Buy," *Standard & Poor's.*
[164] Taylor, "The repping of the Web."
[165] Rick E. Bruner, "Softbank Introduces Ad Network with 27 Sites," *Advertising Age*, September 15, 1997.
[166] Jane Hodges, "Local Newspapers Get National Advertising Help," *Advertising Age,* April 28, 1997.
[167] "Ads Find Strength in Numbers," *CNet News*, November 4, 1996, http://news.cnet.com/Ads-find-strength-in-numbers/2009-1001_3-243757.html

networks and related companies made it more practical for marketers to allocate portions of their ad budgets online. Boosted by ad networks and the beginning of the dotcom bubble, online advertising spending reached nearly $1 billion in 1997, closing in on spending totals for outdoor media ($1.4 billion).[168]

The technical characteristics of the web's communication protocols and HTTP cookies were immensely consequential to the rapid expansion of ad targeting and consumer profiling that enabled the growth of ad networks in general and DoubleClick's market leadership in particular. Building on the two-way communication structure of HTTP, DoubleClick was able to create a centralized advertising system that threaded across the decentralized internet. The structure of HTTP enabled web publishers to join and participate in ad networks with minimal effort and maintenance. Likewise, because cookies were created as an extension of HTTP's established protocols and were thus supported by web browsers by default, DoubleClick was able to integrate them into its ad serving processes without having to augment web server/client software. Further still, because cookies were built into HTTP in a manner that operated largely behind-the-scenes, DoubleClick was able to implement them widely with little immediate awareness, let alone resistance.[169]

This particular implementation of cookies therefore not only combined the distinct practices of ad serving and consumer profiling into a unified technical process, but also conferred significant market power to DoubleClick through network effects and economies of scale. These issues are explored further in chapter three. For now, it is enough to note that the structure of the web technology appropriated by DoubleClick played a fundamental role in the creation of a business model in which every ad served was also an opportunity to gather data

[168] Kate Maddox, "Internet ad sales approach $1 billion," *Advertising Age*, April 6, 1998.
[169] A notable exception is the failed effort by the Internet Engineering Task Force to curtail the use of "third-party" cookies. See Kristol, "HTTP Cookies."

about internet users and the efficacy of ad campaigns themselves. In theory, the more ads the company delivered, the more accurately targeted each became. The fluidity with which DoubleClick was able to integrate its operations into the basic functionality of web serving enabled it to grow remarkably fast and solidify market power early on in the industry's development. Moreover, it set up the technical foundations for the increasingly sophisticated forms of consumer surveillance that followed in the next few years.

Articulating the consequences of the technological affordances of web protocols and cookies does not imply technological determinism. Some of the most insightful research in this area tends to overstate the implications of the third-party cookie "loophole" in "creat[ing] a new market" for companies such as DoubleClick.[170] While vitally important, the deployment of cookies in this manner did not "create" the ad network market. The cookie was appropriated by companies acting in accordance with specific economic objectives within a unique financial context (as addressed in subsequent chapters). The technological characteristics of online advertising's implementation cannot be abstracted from these social relations. Nevertheless, by 1997 cookies had become a standard tool for web marketing. The IAB trade group articulated its official support for cookies, citing a survey that found them to be "an essential part of member companies' business strategies" for "measuring site users, developing user profiles… and advertising targeting."[171] Though still under construction, the contours of what would become a "surveillance infrastructure" for online advertising had begun to take shape.

The next four years saw an expansion and refinement of the business relations and technologies of online advertising and consumer surveillance in particular. DoubleClick, NetGravity, CMGI and a handful of others emerged as market leaders – a vanguard of the

[170] Shah and Kesan, "Recipes for cookies," 325.
[171] Internet Advertising Bureau, "Internet Advertising Bureau Backs Cookies," June 9, 1997, http://www.iab.net/about_the_iab/recent_press_releases/press_release_archive/press_release/4234

internet advertising sector.[172] Although still not profitable, they were earning revenue and relentlessly promoting themselves through public relations and their own advertising campaigns. And while falling short of fully satisfying the demands of marketers regarding quantification of results, the sophistication of their ad serving systems and scope of their reach surpassed contemporary alternatives and continued to point to intensified use of the web as an advertising medium. As *HotWired* described it, "The days when the net seemed to exist outside the laws of capitalism [were] just about over."[173]

The broader construction of a surveillance infrastructure for online advertising is the subject of chapters three and four, which examine the maturation of the sector vis-à-vis the dotcom investment bubble and marketers' fixation with increasingly measurable return-on-investment. Chapter two sets the stage for these developments by illustrating the bubble's role in creating an influx of well-capitalized dotcom companies that generated supply and demand for online advertising and became an important client group for ad service providers such as DoubleClick.

[172] "Ads Find Strength in Numbers," *CNet News*.
[173] *HotWired*, March 12, 1996. Quoted in Peter Golding, "World wide wedge: Division and contradiction in the global information infrastructure," *Monthly Review*, 48, no. 3 (1996), 70.

Chapter 2

The Marketing/Finance Feedback Loop: Advertising Demand and the Dotcom Bubble

Online advertising's construction was fundamentally linked with a major financial market boom and bust that centered on the commercialization of the internet – the dotcom bubble. This chapter and the next trace the major vectors of the reflexive interplay between the dotcom bubble and the growth of the online advertising industry. Chapter three examines how the bubble directed significant amounts of capital to ad services companies such as DoubleClick that deployed it to construct an infrastructure for online advertising. Buoyed by speculative investment, these infrastructure providers transformed a critical mass of the web into a mainstream advertising platform that became centered on consumer surveillance.

This chapter sets the stage for these developments by tracing a broader process whereby finance and marketing became deeply intertwined in the context of rapidly growing internet-related speculative investment. Borrowing from cybernetics, the metaphor of a feedback loop illustrates this integration. In a simple feedback loop actions generate information and outcomes that in turn influence subsequent actions within the same system. In this instance, soaring investment markets and the growing online advertising sector entered into a pattern of mutual reinforcement that began in 1995 and intensified throughout the bubble's inflation.

Through venture capital funding and initial public offerings (IPOs), public and private investors provided huge sums of operating capital to a host of largely unprofitable "dotcom" companies that sought to commercialize the internet. Via these conduits, billions of dollars poured into the nascent online advertising sector, generating a surge of demand for ad services and helping to legitimize the internet as a marketing channel. These outlays, which would have previously been marked as risky, were rationalized through a *New Economy* ideology that

"bundled together mythologies of entrepreneurial risk taking with a promise of 'prosperity for all'" and greatly privileged marketing practices.[1] Established measures of financial assessment such as profitability were superseded by marketing-based metrics such as "mindshare." At the same time, a Get Big Fast business model premised on rapid expansion and brand recognition became normalized among dotcoms looking to commercialize "cyberspace." In this context, advertising and public relations became key competitive weapons in the struggle to not only win customers, but to attract essential investment capital as well.

The Dotcom Bubble and Risk Investment

The full range of the dotcom bubble's determinants and outcomes extend well beyond online advertising and even the internet at large.[2] Financial bubbles have been regular occurrences throughout the development of industrial capitalism. Critical scholars have argued that market bubbles are manifestations of capitalism's structural crisis tendencies.[3] The purpose here is not to provide a comprehensive analysis of the dotcom bubble, but to elucidate its close intersection with the creation of online advertising. Still, it is worth noting that the magnitude of economic destruction left in the bubble's wake was substantial, even in the age of the $700 billion government rescue of the banking system.[4] The dotcom collapse is estimated to have produced

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[1] Geert Lovink, "After the Dotcom Crash: Recent Literature on Internet, Business and Society," *Australian Humanities Review*, 27 (2002), http://www.australianhumanitiesreview.org/archive/Issue-September-2002/lovink.html

[2] Important factors that contributed to the bubble's rise and fall were the self-interested risk capital sector, the popularization of investing, strong support from the Clinton administration for the commercialization of the internet, federal monetary policy designed to influence investment markets, a series of corporate financial scandals, relatively strong overall economic growth in the US, and the broad historical trend of financialization. Timothy A. Canova, "The Legacy of the Clinton Bubble," *Dissent Magazine*, Summer 2008, http://www.dissentmagazine.org/article/?article=1229; Roger Lowenstein, *Origins of the Crash: The Great Bubble and its Undoing* (New York: Penguin, 2004); John Cassidy, *Dot.con: The Greatest Story Ever Sold* (New York: HarperCollins, 2002), 118-123, 215.

[3] For an historical analysis of financial bubbles within capitalism See, John K. Galbraith, *A Short History of Financial Euphoria,* (New York: Viking Penguin, 1993). For a more contemporary analysis see David Harvey, *Enigma of Capital: And the Crises of Capitalism* (New York: Oxford University Press, 2010).

[4] "What about the rest of us?" *New York Times*, September 25, 2008, http://www.nytimes.com/2008/09/26/opinion/26fri1.html?ref=bailoutplan

market losses between $7 and $8.5 trillion; costs which extended well beyond the investor class.[5] As reported by *The Nation,* the crash wiped out one-third of the total value of all individual retirement accounts and cost two million jobs.[6] Given this, it makes sense that many accounts of the bubble emphasize its devastating consequences. Offering a different perspective, this chapter explores the bubble's generative capacity as it relates to the construction of online advertising and the creation of demand for ad services in particular.[7] This requires an understanding of the bubble's protagonists, in particular the internet companies that received investment funding and the financial institutions that provided it.

Standard economic theory characterizes a speculative financial bubble by the detachment of asset prices from estimations of their value that are grounded in observable "economic fundamentals" such as cash flow, earnings, and debt.[8] In a bubble scenario prices are not driven by these indicators and are instead propelled reflexively by investment itself.[9] The speculative investment of the dotcom bubble centered on companies who sought to commercialize the rapidly growing internet. As such it was closely linked to the Nasdaq stock exchange. Established in 1971 as the first system for trading stocks electronically, the Nasdaq became known more widely for its composite stock index, a listing of approximately 3,000 publicly traded securities. Because of its high concentration of technology companies and dotcoms during

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[5] Kenneth R. Gray, Larry A. Frieder, and George W. Clark, Jr., "Financial Bubbles and Business Scandals in History," *International Journal of Public Administration*, 30 (2007): 885; Robert Sherill, "Why the Bubble Popped," *The Nation*, May 3, 2004, 57-61.
[6] Most IPO securities are purchased by institutional investors such as mutual funds. See Sherill, "Why the Bubble Popped."
[7] For a discussion of generative capacity of financial bubbles see Carlota Perez, *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages* (Northampton, MA: Edward Elgar, 2002).
[8] *An Encyclopedia of Macroeconomics* (Edward Elgar, 2002), s.v. "speculative bubbles."
[9] Yet another example of a "feedback loop." George Soros, *The Alchemy of Finance: Reading the Mind of the Market* (New York: Simon and Schuster, 1987).

1990s, the Nasdaq index became a standard shorthand for quantifying the magnitude of the bubble and charting its rise and fall.[10]

For the purposes of this analysis, the bubble can be divided into three phases occurring between 1995 and 2002. (See figure 2). A *run-up period* from early 1995 through September 1998 saw the bubble grow quickly but not uninterrupted.[11] From October 1998 to March 2000 the bubble entered a stage of extreme growth. This *frenzy* period saw a dramatic growth in the number of public stock offerings, the total amount of capital invested, and the value of internet stocks. As will be shown, each of these factors contributed significantly to online advertising's development. The bubble's *decline* stage began in March 2000 and ended when the Nasdaq bottomed out in October 2002. The market's deflation was even quicker than its expansion. The first year of decline halved the Nasdaq composite and wiped out $4 trillion in market value.[12] Leaving aside the major financial downturn of 2008-9, since 2006 the Nasdaq has traded fairly consistently at approximately half of its peak value in 2000.

Figure 2. Nasdaq Composite Index Values (1995-2002). Run-up period in blue. Frenzy period in red. Decline period in orange.

[10] The Nasdaq composite index is a market capitalization-weighted grouping of all of stocks listed on the exchange. It is a statistical representation of the market's performance over time.
[11] The market suffered downturns in the second quarter of 1996, first quarter of 1997, and especially the third quarter of 1998. A number of IPOs were postponed or abandoned during these turbulent phases.
[12] Gretchen Morgenson, "How Did They Value Stocks? Count the Absurd Ways," *The New York Times*, March 18, 2001.

I use the term *risk capital* to refer to a form of highly speculative and often short-term investment whereby funds are "rapidly deployed" in order to obtain above-average returns.[13] This expression, rather than the more general "finance capital" highlights its volatile nature. Risk capital is best conceptualized as a subset of finance capital, which more generally employs investment resources via instruments and markets that are detached from the actual production of goods and services.[14] Where appropriate I differentiate between the two.

In the context of the dotcom bubble, risk capital was primarily deployed through private venture capital firms and public stock markets. It is worth mentioning that institutionalized risk investment of this sort is not a particularly new phenomenon. Beginning in the post-war era and expanding throughout the 1980s, the heretofore "informal process of risk investing evolved into more formalized venture financing institutions."[15] The most notable of these are venture capital firms, many of which became closed linked with the technology sector and California's Silicon Valley.[16] Venture capital firms form investment vehicles ("funds") constituted by agreements among the firm's principals ("general partners") and outside investors ("limited partners"). Typical limited partners are public and private pension funds, university endowments, insurance companies, and wealthy individuals. Under the management of the general partners, funds are invested in portfolio companies in a cascading series of financing rounds that are usually conditional upon negotiated growth benchmarks. During the bubble, Silicon Valley venture

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[13] National Venture Capital Association, *Venture Impact: The Economic Importance of Venture Capital-Backed Companies to the U.S. Economy* (2011), 1.
[14] Gérard Duménil and Dominique Lévy, *Capital Resurgent: Roots of the Neoliberal Revolution* (Cambridge: Harvard University Press, 2004.)
[15] Matthew A. Zook, *The Geography of the Internet Industry: Venture Capital, Dot-coms, and Local Knowledge* (Malden, MA: Blackwell, 2005), 54.
[16] See Martin Kenney, ed., *Understanding Silicon Valley: The Anatomy of an Entrepreneurial Region* (Stanford University Press, 2000).

capital firms (and to a smaller extent, their East Coast counterparts) provided a great deal of funding to companies seeking to commercialize the internet.

Based on the other side of the country in New York's financial district, public equity markets made up the second component of the bubble's risk investment system. Initial public offerings (IPOs) were of singular importance, particularly those listed on the Nasdaq and to a lesser degree, the New York Stock Exchange. Stewarded by investment banks and stock brokerages, an IPO is the process whereby companies go from private to public by issuing shares to investors on an exchange. IPOs are typically held to raise capital against promises of future earnings and to give companies the legitimacy of being publicly traded, which can be leveraged in business transactions such as securing debt.

These two components are linked because the IPO is a primary venture capital "exit strategy" whereby VCs sell part or all of their ownership stakes in order to realize profits, or "cash out."[17] Together venture funding and IPOs constitute the basic two-step investment system at the heart of dotcom bubble financing. Venture capital firms funded a hoard of dotcom start-up companies in order to guide them to public offerings that would generate windfall returns via booming financial markets. Who exactly were these dotcoms?

For purposes of this analysis, the label dotcom signifies those companies that held an IPO between 1995 and 2001 for which some aspect of commercializing the internet was a major component of their business activity (i.e. not an afterthought). These include well-known companies such as Yahoo (a web publisher and portal), Amazon (an online retailer), and E*Trade (an online financial brokerage), as well as lesser known entities such as DoubleClick

[17] National Venture Capital Association, *Venture Impact*, 11. There are different time constraint regulations for founders and VCs, but this is not material here. The other major VC exit strategy is divestment via merger or acquisition (M&A). Venture-backed M&A activity was larger than IPO activity during the period, but my sense is that the IPO was the preferred exit strategy for dotcoms because of the internet stock bubble. See Thompson Reuters, *National Venture Capital Association Yearbook* (2011), 49-53.

and CMGI (online advertising services providers). Dotcoms can be understood as an elite subset of the estimated 50,000 new ventures that were created to commercialize the internet in various capacities.[18]

The distinction is important to make at the outset because while dotcoms made up a minor fraction of the companies that sought to commercialize the internet during the bubble, they "represented the lion's share of assets, market capitalization, and perhaps employment."[19] As the best capitalized ventures, dotcoms controlled the majority of business spending in the sector. As will be demonstrated, a significant portion of this spending, and in some cases a majority of companies' operational budgets, was allocated to advertising. There is no standard list of dotcom companies. Building on separate research by Jay Ritter and John Cassidy, I have identified a population of 655 US-based dotcoms that collectively raised approximately $50 billion via IPOs during the bubble period.[20] Limiting the population to the Nasdaq exchange only, but including a wider range of firms in the more broadly defined technology and communications sectors yields a larger sample of approximately 900 IPOs that generated a total of $70 billion. A definitive accounting of US-based dotcoms most likely sits within the lower range of these samples.

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[18] Goldfarb et al. estimate that about half of this group received business financing (private or public) of some sort. This group does not include subsidiaries of established companies such as MSN (part of Microsoft) or NBCi (NBC), nor companies from the technology (e.g. IBM) or telecommunications (e.g. AT&T) sectors. Together, newly formed companies and online divisions of established companies make up the more broadly defined "internet sector." See: Brent D. Goldfarb, Michael D. Pfarrer, and David Kirsch, "Searching for Ghosts: Business Survival, Unmeasured Entrepreneurial Activity and Private Equity Investment in the Dot-Com Era," Social Science Research Network Working Paper No. RHS-06-027, October, 12 2005, 3, http://ssrn.com/abstract=825687.

[19] Goldfarb et al., "Searching for Ghosts," 3.

[20] Compiled from Bloomberg, Capital IQ, and Wharton Research Data Services (WRDS) financial databases and cross-referenced with lists from Jay R. Ritter, "A List of Internet IPOs" *IPO Data*, http://bear.warrington.ufl.edu/ritter/ipodata.htm and Cassidy, *Dot.con*. It is important to note that these totals include only funds raised from IPOs. Investment generated from follow-on equity offerings and common stock shelf registrations as well as fixed-income offerings of corporate bonds/notes are excluded, as is all private risk capital from venture funds.

As the bubble progressed, scores of investors netted high returns from dotcom IPOs and it became easier and easier for venture firms to raise capital.[21] Greater numbers of investors looked to venture funds to provide the elevated profit margins attainable through speculation. Annual VC investment exploded during the period, growing from $7.3 billion in 1995 to nearly $100 billion in 2000, and remaining under $40 billion every year since.[22] Comparing 1990 to 2000, the number of active VC firms more than doubled from 384 to 861, while the number of companies funded in those years grew from 1050 to 6420.[23]

It is not surprising that a majority of the risk capital raised during the bubble period was invested in companies that sought to commercialize the internet.[24] During the frenzy phase (late 1998-early 2000) this trend accelerated strongly. Between 1995 and 1998 venture capitalists invested $22.1 billion in internet companies, representing just under half of total VC investment for the period.[25] Internet investment in 1999 and 2000 combined increased nearly six fold to $127.4 billion and accounted for some 80% of total VC investment. As this capital was deployed the population of dotcom companies increased, as did the value of individual funding

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[21] Jeffrey A. Tannenbaum, "Financing Small Business: Venture Capitalists Enjoy Swifter Follow-Up Financing," *Wall Street Journal*, June 9, 1998, 1. Still some dissenters remained among the investment community and in the press, especially during 1998's third quarter downturn. As *Crain's New York Business* remarked about the fund-raising success of one dotcom company, "What's most astounding isn't that Earthweb raised $20 million in private equity without generating a dime of profit. Rather, it's that Earthweb's story echoes throughout New York's Silicon Alley" and beyond. Certain observers, including some in the ad industry, began forecasting a major market correction in late 1998. But predictions such as these proved premature as the dotcom mania vaulted into overdrive. See: Jon Birger and Judith Messina, "Up in Smoke," *Crain's New York Business*, November 16, 1998, 1.

[22] National Venture Capital Association, *Venture Impact*, 5.

[23] Thompson Reuters, *National Venture Capital Association Yearbook, 9*; National Venture Capital Association, *Venture Impact*, 5

[24] Already in the early 1990s, leaders in media and finance were already aware of the need for mutual endeavor, regardless of the specific platform. Investment brokers such as Hambrecht & Quist (and later Allen & Co.) held elite gatherings to bring top executives together to grease the wheels for investments, public offerings, mergers, and acquisitions. PR Newswire, "Interactive entertainment companies to spotlight dynamic new consumer area at Hambrecht & Quist Conference," March 13, 1995; Michael Liedtke, "Herb Allen's Sun Valley media summit a-Twitter about tech," *USA Today*, July 5, 2009.

[25] Zook, *Geography*, 54. PricewaterhouseCoopers defines "internet-specific" as "a discrete classification assigned to a company whose business model is fundamentally dependent on the Internet, regardless of the company's primary industry category." PricewaterhouseCoopers, *Money Tree Report* (2010), https://www.pwcmoneytree.com/MTPublic/ns/nav.jsp?page=definitions

commitments. Start-ups that only a few years earlier "would have been happy to receive a few million in venture funding routinely [received] up to ten times that amount."[26] Dotcom IPO funding soared as well. Between 1999 and 2000 nearly 500 dotcoms raised more than $40 billion via IPOs compared to just $8.5 billion raised by the 187 dotcoms that went public in the previous three years.[27] And these data reflect only those companies that held public offerings. Many more businesses attracted various forms of financing outside of public markets, and many dotcoms continued to raise money beyond the IPO by issuing follow-on offerings.[28] All told, an estimated 24,000 internet-related firms generated over $256 billion from public and private investors during the bubble period.[29]

Netscape: "The first great internet stock."[30]

The history of Netscape Communications illustrates how one of the first and most influential dotcom companies integrated speculative investment and marketing practices into the core of its business development strategy. By securing venture funding and holding an early IPO in 1995, Netscape pioneered a business strategy called Get Big Fast that became a standard model for dotcoms during the bubble. Netscape is widely known as the first entity to popularize the graphical web browser. Its Navigator software, based on the Mosaic browser developed at the National Center for Supercomputing Applications at the University of Illinois, spread like wildfire among early internet users upon its release in 1994. Millions of copies were distributed

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[26] Debra Aho Williamson and Alice Z. Cuneo, "Flexing VC Influence," *Advertising Age* [Interactive Supplement], November 11, 1999.
[27] Compiled from Bloomberg, Capital IQ, and Wharton Research Data Services (WRDS) financial databases.
[28] Regardless of the bubble, most companies that received venture funding did not make it to the IPO stage.
[29] Data is for 1996-2002. Goldfarb et al., "Searching for Ghosts." Sector-specific private venture capital data is more difficult to obtain than financial data on public companies. Goldfarb et al. have demonstrated the incomplete nature of standard financial research databases. Nevertheless, macro-level trends are observable that demonstrate the extent to which venture capital poured into dotcom companies during the bubble.
[30] Joe Nocera, interview in "Dot Con [Program #2010]," *Frontline*, PBS, January 24, 2002, http://www.pbs.org/wgbh/pages/frontline/shows/dotcon/interviews/nocera.html

in a matter of months.[31] Navigator exploded because it was easy to use, worked on a variety of computing platforms, and included support for images and multimedia. But it was also free.

Netscape's management chose to distribute the browser to consumers under a free-trial license, a payment scheme based essentially on the honor system, while earning revenues by charging business users for ancillary web development and server products.[32] Citing future competitor Microsoft as an inspiration, co-founder Marc Andreessen summarized the rationale: "Market share now equals revenue later and if you don't have market share now, you are not going to have revenue later."[33] This Get Big Fast strategy, paired with the company's "relaxed" approach to collecting license fees from consumers, allowed Netscape to control some 70% of the web browser market by mid-1995.[34]

The basic assumptions of the Get Big Fast strategy are fairly straightforward. Rather than pursue incremental growth, the aim is to saturate a given market as quickly as possible in order to minimize competition.[35] The "Fast" is about gaining so-called "first mover advantages," while the "Big" is about securing them through rapid expansion.[36] The rationale is that the first mover into a given market has more time to establish business competencies, a better chance to cultivate

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[31] Jim Clark, *Netscape Time: The Making of the Billion-Dollar Start-up that Took on Microsoft,* with Owen Edwards (New York: Saint Martins, 1999), 4.
[32] As described in chapter one, the company was also among the first to sell advertising space on its website.
[33] Cassidy, *Dot.con*, 64.
[34] Steve Higgins, "Is Sell Now, Profit Later Right Internet Strategy?," *Investor's Business Daily*, October 24, 1995; Joshua Quittner and Lawrence Mondi, "Browser madness," *Time*, August 21, 1995, 56. Although Netscape was the dotcom era's first major proof-of-concept for the Get Big Fast strategy, Amazon became its poster child. Amazon's founder Jeff Bezos, a former Wall Street executive and computer scientist, made it his company's mantra, even printing the slogan on tee shirts. Cassidy, *Dot.con*, 144.
[35] David A. Kirsch and Brent Goldfarb, "Small Ideas, Big Ideas, Good Ideas: Get Big Fast and Dot-Com Venture Creation," in *The Internet and American Business*, ed. William Aspray and Paul E. Ceruzzi (Cambridge: MIT Press, 2008).
[36] First mover advantage is a contested concept among business scholars. See Colin Barrow, "Internet firms: what strategic changes have to be managed?," *Strategic Change*, 10, no. 2, (2001), 77-85.; Marvin B. Lieberman and David B. Montgomery, "First-mover advantages," *Strategic Management Journal*, 9, (2007), 41–58; Peter N. Golder and Gerard J. Tellis, "Pioneer Advantage: Marketing Logic or Marketing Legend?," *Journal of Marketing Research*, 30, no. 2, (1993), 158-170; Marvin B. Lieberman and David B. Montgomery, "First-mover (dis)advantages: retrospective and link with the resource-based view," *Strategic Management Journal*, 19 no. 12, (1998), 1111–1125.

premier brand recognition, and thus greater opportunities for customer acquisition and retention. Dominant market share (bigness) is central to realizing these benefits and creating barriers to entry for competitors. Thus, companies pursuing Get Big Fast prioritize the aggressive expansion of their operations and customer bases.

The key is that growth of this nature requires substantial capital. Speculative investment was just beginning to increase in 1995 and was about to become widely available for internet companies of all stripes. Netscape took advantage of opportunities to secure funding first from venture capital firms, then from established media companies, and finally via the public stock market through an IPO and subsequent financing rounds. Initial seed capital was put up by Silicon Valley businessman and Netscape co-founder Jim Clark, who then used his connections to secure a relatively modest $5 million investment from top tier venture capital firm Kleiner Perkins Caufield & Byers.[37] Netscape initially used this money to develop improved iterations of its Navigator browser, pushing them to market as quickly as possible.

Within a year, increasing media attention to the rapid growth of the internet and concomitant awareness of Navigator's position as the dominant web browser gave Netscape the leverage to raise an additional $20 million by issuing equity to a select group of media and telecommunications companies including Hearst, Knight Ridder, Times Mirror, and TCI.[38] In addition to supplying Netscape with capital and credibility, this "private placement" demonstrated that the old guard of the media industry was beginning to show interest in the internet. Almost immediately after securing this corporate financing, Netscape initiated the initial

[37] Michael Peltz, "High tech's premier venture capitalist," *Institutional Investor*, 30, no. 6 (1996), 89.
[38] John Motavalli, *Bamboozled at the revolution: How big media lost billions in the battle for the Internet* (New York: Viking, 2002), 83.

public offering process in order to capitalize on an investment market that already seemed "too hot not to cool down."[39]

Netscape's dramatic IPO in August 1995 is often recognized as a signal moment in the dotcom bubble's early development. The company originally intended to issue 3.5 million shares at $12 each, but increased the offering to 5 million at $28 on the advice of its underwriters.[40] Trading opened so frantically that the share price was bid up to $71 prior to the open and closed the day just over $58, up an unprecedented 108% from the offer price. Netscape earned $140 million from the deal and saw its valuation, which six months prior had been an estimated $180 million, instantly jump to over $2.2 billion.

As PBS's Frontline would later report, the Netscape IPO was a "historic and prophetic moment on Wall Street."[41] It was historic because of the size and frenzied nature of the deal. It was prophetic because it had the dual outcome of kick starting widespread speculative internet investment and legitimizing the business model that "came to define an entire generation of internet technology companies."[42] Two months after Netscape's IPO, an executive at the technology-focused investment bank Hambrecht & Quist explained to a reporter that "It actually behooves internet companies to postpone profits and spend as much as they can to grow now…The right business model for internet technology companies is Get Big Fast."[43]

For dotcom companies, Get Big Fast crystalized into a strategy of rapid business expansion fundamentally sustained and driven by financial capital. Internet companies worked feverishly to grow operations and build consumer awareness in order to obtain dominant market

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[39] Clark, *Netscape Time,* 3.
[40] Cassidy, *Dot.con*, 83-5.
[41] "Dot Con [Program #2010]," *Frontline*, PBS, January 24, 2002, http://www.pbs.org/wgbh/pages/frontline/shows/dotcon/etc/synopsis.html
[42] Kirsch and Goldfarb, "Small Ideas," 261. See also Brent Goldfarb, David Kirsch, and David A. Miller, "Was there too little entry during the Dot Com Era?," *Journal of Financial Economics*, 86 (2007), 100-144; Justin Fox, "Net Stock Rules: Masters of a parallel universe," *Fortune*, June 7 1999, 66-72.
[43] Higgins, "Is Sell Now, Profit Later Right Internet Strategy?."

share, which required substantial cash outlays. Imbricated in the growing speculative bubble, the two-part system of VC/IPO investment became the central means of generating the funds needed to pursue Get Big Fast.[44] What is important here is that from the very beginning, and indeed starting with Netscape, advertising was a fundamental component of the dotcom Get Big Fast strategy.

Flush with risk capital and pursuing Get Big Fast, dotcoms led online advertising spending and produced the majority of ad impressions for much of the bubble period. Their influence was central to the web's growth as an ad medium, but the relationship between dotcoms and the development of online advertising is more complex than a simple function of expenditures. While this demand-creation function will be analyzed in detail, the impetus and outcomes of dotcom advertising spending first need to be situated within a broader entanglement of marketing and finance that was inseparable from the speculative asset bubble itself.

Marketing-based asset valuation

Standard investment theory holds that the value of a company is based on objective indicators of business performance and has little to do with marketing practices like advertising and public relations. In practice, less measureable factors like brand awareness and public image – heavily influenced by advertising but rarely accounted for on financial statements – are among the determinants of a company's fundraising success. Robert Schiller and others have examined this relationship from the standpoint of behavioral finance. As Schiller argues in *Irrational Exuberance*: "The role of the news media in the stock market is not, as commonly believed, simply as a convenient tool for investors who are reacting directly to the economically

[44] Netscape's use of a private placement made it somewhat unique. The more common trajectory by far moved directly from venture funding to an IPO.

significant news itself. The media actively shape public attention and categories of thought, and they create the environment within which the stock market events are played out."[45]

During the dotcom bubble, marketing's importance within the IPO process grew to epic proportions. Specifically, advertising and public relations became core drivers of the essential appraisal and pricing measures that precede IPOs and of the valuation of public securities thereafter. Let's return for a moment to Netscape, which was in many ways the master mold for the avalanche of dotcoms that followed. A crucial detail of its history is that on the day of its IPO the company had not recorded a single dollar of profit.[46] It was altogether unproven; a fledgling company with just two quarters of sales history, yet its IPO was wildly successful. This set in motion a new investment rationality for the dotcom era. In the words of one Silicon Valley venture capitalist, Netscape "triggered…a sense that you didn't have to be profitable to go public."[47] It came to symbolize the idea that profitability, a long-standing rule-of-thumb for companies seeking IPOs, had become outmoded in the New Economy.[48] In 1995, almost two-thirds of new stock issuers had profitable operations when they held initial public stock offerings. By the first quarter of 2000, fewer than one in five companies were profitable at the time of their IPO.[49]

If Netscape's IPO was a triggering event, the retreat from the profitability standard was formally articulated into a new valuation model by a vanguard of investment professionals whose pronouncements were reproduced and enlarged by an uncritical and, in some cases, obsequious, media system.[50] In February 1996 a highly influential report from Morgan Stanley

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[45] Robert J. Schiller, *Irrational Exuberance,* 2nd ed. (Princeton: Princeton University Press, 2009), 105.
[46] Lowenstein, *Origins of the Crash*, 84.
[47] Jay Hoag, interview in "Dot Con [Program #2010]," *Frontline*, PBS, January 24, 2002, http://www.pbs.org/wgbh/pages/frontline/shows/dotcon/etc/script.html
[48] Cassidy, *Dot.con*; Lowenstein, *Origins of the Crash*, 111.
[49] Morgenson, "How Did They Value Stocks?."
[50] H. Green, "Mary J. Meeker, *BusinessWeek*, September 27, 1999.

analysts Mary Meeker and Chris DePuy helped to legitimize speculative dotcom investment by framing the internet as an under-explored investment frontier with massive potential for growth. In many ways Meeker and DePuy *were* in uncharted territory. The internet business sector was a new phenomenon and many of the companies involved had been recently formed. Established practices of valuation based on historical earnings were indeed unavailable.

Building on the credibility of their institution, Meeker and DePuy articulated a novel investment approach that downplayed established economic fundamentals (particularly negative cash flow) in favor of different metrics that were argued to be more appropriate for the internet market's huge growth potential.[51] These indicators such as market share and the nebulous "mind share" were not directly measurable by reading company balance sheets, and in some cases, not measurable at all.[52] Rather, these were *marketing-based asset valuation models* that were largely functions of advertising, public relations, interwoven with the general mania of dotcom investment.[53]

Howard Kurtz demonstrates the extent to which investment analysts were given media platforms to espouse new marketing-based asset valuation models and the degree to which such practices were encouraged by media owners and professionals who often had vested interests in market outcomes.[54] A new sub-genre of internet investment market news was engendered, especially on cable television. The "rhetoric of the New Economy was hot and glamorous; internet reporting was everywhere, from the entertainment sections to media pages and IT

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[51] Mary Meeker and Chris DuPuy, "The Internet Report," Morgan Stanley Global Technology Group, February 1996, 8-17, 8-18. While the report emphasizes growth potential promotes marketing-based valuation metrics like "mind share," it does caution that "market share can be misleading" (p8-1). Cassidy and Kurtz make the case that as the bubble heightened, Meeker and other investment analysts, in conjunction with the financial press, abandoned all such discretion and became dotcom evangelists and opportunists. Cassidy, *Dot.con*; Howard Kurtz, *The Fortune Tellers: Inside Wall Street's Game of Money, Media, and Manipulation* (New York: Free Press, 2000).
[52] Meeker and DuPuy, "The Internet Report," 1-20.
[53] Morgenson, "How Did They Value Stocks?."
[54] Kurtz, *The Fortune Tellers,* xxi.

supplements. Tech stocks began to show up on the radar of the mainstream media," while "business magazines such as *Red Herring*, *Fast Company*, *The Industry Standard* and *Business 2.0* achieved high visibility."[55] This simmering media discourse had material consequences. As Nigel Thrift argues, "telling the new economy story worked, and worked to the extent that it began to re-describe market fundamentals."[56] In practice, marketing-based assessment models of the sort endorsed by new economy analysts and gurus created significant incentives for dotcom companies to go after mind and market share, measured perhaps most directly by web site traffic, in order to attract investment and increase their valuation.[57] In other words, the emerging characteristics of the speculative financial bubble encouraged dotcoms to pursue the Get Big Fast/risk capital business model through marketing practices. If Get Big Fast was a "single prolonged bet on a future state of the world in which a select group of 'winners' would dominate the e-commerce landscape," then marketing, already an essential component of business, was the key competitive weapon in the struggle.[58] On this point, the Morgan Stanley analysts were clear: "For now it's important for companies to nab customers and keep improving product offerings: mind share and market share will be crucial."[59]

To explain how this played out, it is necessary to dig deeper into the two-step VC/IPO investment process to illustrate precisely how dotcoms used marketing practices to attract investment and increase their valuation. Like Netscape, the pattern for most dotcoms was to first

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[55] Lovink, "After the Dotcom Crash."
[56] Nigel Thrift, "'It's the romance, not the finance, that makes the business worth pursuing': Disclosing a new market culture," *Economy and Society*, 30, no. 4 (2001), 425.
[57] Brett Wong, M.H. Franco and Xiao-Jun Zhang, "The Eyeballs Have It: Searching for the Value in Internet Stocks," Social Science Research Network, January 2000, http://ssrn.com/abstract=206648; Several studies have demonstrated the considerable influence financial analysts wielded over investment decisions during the bubble period. Qiao Liu and Frank M. Song, "The Rise and Fall of Internet Stocks: Should Financial Analysts be Blamed?," Social Science Research Network, March 2001, http://ssrn.com/abstract=262807; Patricia C. O'Brien, and Yao Tian, "Financial Analysts' Role in the 1996-2000 Internet Bubble," Social Science Research Network, July 2006, http://ssrn.com/abstract=964311; Fox, "Net Stock Rules."
[58] Kirsch and Goldfarb, "Small Ideas," 261.
[59] Meeker and DuPuy, "The Internet Report," 1-20.

attract seed money from venture capital firms and/or wealthy individuals ("angel investors") and then hold an IPO as soon as possible depending upon market conditions.[60] An essential component of fundraising at all stages was the promise of market dominance in order to provide high returns to investors.[61] To this end, it became increasingly necessary to generate positive media publicity, or "investment buzz," across all stages of the investment process, but especially when approaching an IPO.

The run-up to an IPO has three basic components.[62] Led by its investment bank underwriters, an issuing company must first prepare a financial prospectus, including estimated valuation, for potential investors and the Securities and Exchange Commission (SEC). Next, the company must try to drum up demand for its shares by pitching itself to institutional investors in what is called the "road show." Usually a national tour to major cities, the IPO road show has been called "the defining spectacle of the new economy" because of its influence on the third and most important component, pricing the shares on offer.[63] On the advice of their underwriters, issuing companies price their shares based in large part on an assessment of demand gleaned from the success of the road show. Lots of investment buzz generally equates to a higher offer price, which ultimately nets more capital to the issuing company, the underwriters, and any venture investors.

Netscape's co-founder Jim Clark understood the "tremendous importance" of the road show for "raising the level of interest and reassurance in the investment community."[64]

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[60] For a succinct discussion of venture capital industry structures and processes, see Zook, *Geography*, 53-56.
[61] Rational investors of any kind seek to maximize their returns. Equity markets value stocks based on projected profits. Profit margins are generally low in markets with significant competition, but in monopolistic markets profits are much higher. Dotcoms that pursued Get Big Fast were essentially racing to become the dominant player in a monopoly market, so investors, especially those who got in as early as possible, stood to make excellent returns should their principal succeed.
[62] Cassidy, *Dot.con*, 83-4.
[63] Michael Indergaard, *Silicon Alley: The Rise and Fall of a New Media District*, (New York: Routledge, 2004), 64.
[64] Clark, *Netscape Time,* 214.

Netscape's road show was successful despite the company's newness and unprofitability because it had rapid growth, dominant market share, and a knack for generating publicity. Of course, other factors were at play. The company came of age during a period of significant technological change and general economic growth that produced an investment scenario ripe for financial speculation. In mid-1995 it was widely reported that the number of websites was doubling every month.[65] Since 1993 the medium had grown from accounting for one-five hundredth of one percent of total internet traffic to leading all categories at 21%.[66] For Netscape, it certainly helped to be in the right place at the right time.

Still, it is often overlooked that Netscape's media acumen was central to its fundraising success, although Clark was quite clear on the matter. "Anyone starting a company that doesn't try to influence the press's impression surrenders the future to fate, a tremendous mistake," he declared.[67] Appearing in a bevy of major publications in rapid succession, Netscape leveraged the web's explosive growth by billing itself as the gateway to the internet.[68] This shrewd deployment of public relations was a critical factor in securing venture capital and holding a successful IPO.[69] Positive publicity had the twin benefit of raising the company's investment profile directly, while also helping to increase market share.

Netscape's IPO was so important in this context because it demonstrated in dramatic fashion that financial success could be achieved through advertising and public relations *in the absence of profitability*. This lesson was taken to heart by subsequent dotcoms and investors. Branding became "essential for web companies" seeking to attract investment.[70] As the journalist

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[65] Cassidy, *Dot.con*, 65.
[66] Marc Andreessen, "Netscape: Portal to the Web," in *Architects of the Web: 1,000 Days that Built the Future of Business*, ed. Robert Reid (New York: Wiley, 1997), 16, 38.
[67] Clark, *Netscape Time*, 98
[68] Clark, *Netscape Time,* 97-8.
[69] Clark, *Netscape Time,* 98.
[70] Beth Snyder, "Pre-IPO Branding Essential for Web Companies," *Advertising Age* August 24, 1998.

and internet entrepreneur Michael Wolff put it, "publicity is the currency of our time."[71] Soon after securing the first round of investment funding for his start-up, Wolff admitted wryly that his "primary job was now to get the company's name in the paper."[72]

Dotcoms routinely signed contracts with established advertising agencies and public relations firms to launch marketing campaigns in order to gain legitimacy in the eyes of potential investors.[73] As one internet executive declared, "You've got to get an [ad] agency to show VCs that you are making progress with your business plan; having an agency is a comfort factor for VCs."[74] During one eight-month period in 1999, TBDA/Chiat/Day, an agency known for its edgy creative work, reported meeting with no less than 174 dotcoms and signing 13 as clients with slated billings of $290 million.[75] Retaining ad agency services also became a critical method for driving up the value of an impeding IPO. In a common practice, the online music retailer CDNow used $10 million of its venture financing to hire an agency and launch a "marketing blitz" six months prior to its public offering.[76] UK-based online retailer Boo.com similarly launched an estimated $25 million campaign even before its website went live.[77] By some interpretations, using advertising to condition the market in advance of an IPO should have attracted scrutiny from the SEC.[78] Others argued that regulatory frameworks, at least at the level of enforcement, accommodated such marketing practices under the recognition that "you've got to be able to do business."[79] Still, observers noted that many dotcom ad campaigns seemed to be

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[71] Michael Wolff, *Burn Rate: How I Survived the Gold Rush Years on the Internet* (New York: Orion, 1999) 51, 54.
[72] Wolff, *Burn Rate,* 51, 54.
[73] Kurtz, *The Fortune Tellers.*
[74] Laurie Freeman, "Net slashes time from hello to adios," *Advertising Age* October 4, 1999.
[75] Bradley Johnson, "Boom or bust?," *Advertising Age* [Interactive Supplement], November 1, 1999.
[76] Snyder, "Pre-IPO Branding Essential."
[77] Williamson and Cuneo, "Flexing VC Influence."
[78] Suein L. Hwang, "Growing Pains on the Web: In Web Firms' Ad Blitz, an Eye on Wall Street," *Wall Street Journal*, August 19, 1999.
[79] Hwang, "Growing Pains on the Web."

"disproportionately skewed" to financial publications in order "generate confidence in the market."[80]

After the successful public offering of the online community site iVillage sparked a run of IPOs in the spring of 1999, one investment banker took it as "a lesson that the companies with the highest profile in the media earn the highest valuations…In the absence of any rational metric with which to value a company, investors are betting on the future...that means image and brand."[81] iVillage's income disclosures demonstrate this observation. In the year of its IPO the company posted a loss of $93 million on revenues of $36.6 million, yet had an annualized advertising budget of $28.5 million, or three quarters of revenues.[82]

"It was no secret to anyone, apparently, that marketing was the secret" and the fusion of marketing and finance extended to the IPO event itself.[83] Few IPOs have historically been considered newsworthy for audiences outside the financial sector.[84] But during the bubble, IPOs were constructed as marketing events in their own right, becoming essential elements of the dotcom "image-making apparatus."[85] Again, Netscape's Clark was forthright remarking that he saw the IPO as another method "to get the world's attention" through "more marketing bullshit!"[86] For Netscape and most dotcoms thereafter, the IPO's purpose was to generate two windfalls: financial capital and publicity.[87]

And again like Netscape, many dotcoms generated significant media attention as a result of an explosive first day growth of their share prices. During the bubble's frenzy period, the

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[80] Hwang, "Growing Pains on the Web."
[81] Indergaard, *Silicon Alley,* 81.
[82] "Mad.Av.Dotcom: Special Report," *Advertising Age* [Interactive Supplement], November 1, 1999; Data compiled from Bloomberg, Capital IQ, and Wharton Research Data Services (WRDS) financial databases.
[83] Wolff, *Burn Rate,* 51; Thrift, "It's the romance, not the finance," 425.
[84] Kurtz, *The Fortune Tellers,* xvii.
[85] Clark, *Netscape Time,* 8; Indergaard, *Silicon Alley*, 56.
[86] Cassidy, *Dot.con*, 81.
[87] Cassidy, *Dot.con*, 81.

quantity and magnitude of these price spikes were unprecedented in the history of the stock market.[88] In the 1980s the average price increase on the first day of trading was six percent.[89] In 1997 and 1998, a total of 14 IPOs doubled in price on the first day of trading.[90] At the peak of the bubble in 1999 that figure ballooned to 115, with another 87 occurring in the first three quarters of 2000. Some dotcoms even saw their stock prices increase by triple-digit percentages. In November 1998 shares of web publisher theglobe.com famously closed at $63.50 from a $9 start for a first day jump of over 600 percent. Since the bubble's collapse, from the fourth quarter of 2000 through 2011, only five companies have doubled their share price on the first day of trading.

First day price spikes became grist for calculated public relations campaigns by dotcoms and their advertising/public relations teams.[91] On its face, a large price spike implies a highly sought after stock and thus a valuable company. A caveat however is that excessive first day increases are not strictly in the best financial interest of the issuing company. The difference between a stock's opening and closing price is known on Wall Street as the "pop."[92] The value of the pop multiplied by the number of shares issued is "money left on the table" because the issuing company only collects the value of the shares sold at the initial offer price.[93] All of the trading profits (or losses) realized after the actual IPO are reaped by external parties such as underwriters and investors, rather than by the issuing company itself. A large pop usually

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[88] The pop is "the price differential between the offering price of an IPO stock and its closing price on the first day of trading." "An IPO Primer," *Frontline*, PBS, January 24, 2002, http://www.pbs.org/wgbh/pages/frontline/shows/dotcon/thinking/primer.html

[89] Lowenstein, *Origins of the Crash*, 112.

[90] Statistic is for IPOs with an offer price of greater than five dollars. Jay R. Ritter, "Number of U. S. IPOs with an offer price of greater than $5.00 that doubled (offer to close) in price on the first day of trading, 1997-2011," *Initial Public Offerings: Tables Updated Through 2011*, December 31, 2011, 9, http://bear.warrington.ufl.edu/ritter/IPOs2011Statistics123111.pdf

[91] Lise Buyer, interview in "Dot Con [Program #2010]," *Frontline*, PBS, January 24, 2002., http://www.pbs.org/wgbh/pages/frontline/shows/dotcon/interviews/buyer.html; Indergaard, *Silicon Alley*, 69.

[92] Nocera, interview in "Dot Con [Program #2010]."

[93] Nocera, interview in "Dot Con [Program #2010]."

indicates that the demand for shares was underestimated and/or shares were priced too low at offer.

Despite this, dramatic IPO price spikes were repeatedly sought after by dotcoms as marketing pseudo-events.[94] While theGlobe.com's record-breaking pop produced a wave of publicity, the company walked away with nearly $170 million left on the table. It should be a safe assumption that most executives would not consider this a sound long-term business decision. While demand for shares cannot be perfectly predicted, investment bankers had been able to solidify a 10-15% pop as a de facto industry standard.[95] That so many dotcoms agreed to underprice their IPOs seemingly in exchange for publicity hints at the extent to which marketing became a guiding business strategy.[96] Of course the requirement for a positive media profile did not cease after the IPO. Pursuing Get Big Fast, many companies needed to raise additional capital through follow-on offerings, which depended heavily upon public image.[97]

Risk capital and dotcom ad spending

As has been shown, marketing practices became important indicators of economic value during the bubble. Advertising and public relations in particular moved to the heart of the dotcom Get Big Fast business strategy as means to secure market share and attract investment. In a parallel process, risk capital bankrolled a wave of online advertising spending by dotcoms, catalyzing the web's development as an advertising medium. Advertising thus functioned as a primary mechanism by which investors sought to use their resources to reconstitute the internet as a means to deliver returns on speculative investment.

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[94] There are other mitigating factors at play. Both underwriters and majority shareholders (founders, executives, venture capital investors) have incentives to pursue a large pop. Underwriters can curry favor with institutional investors in the share allocation process and make money from commissions, while majority shareholders can see their personal wealth expanded dramatically on paper.

[95] Randall Smith, interview in "Dot Con [Program #2010]," *Frontline*, PBS, January 24, 2002, http://www.pbs.org/wgbh/pages/frontline/shows/dotcon/interviews/pulliam-smith.html

[96] It perhaps also suggests the extent to which investment bankers were able to fleece internet entrepreneurs.

[97] Fox, "Net Stock Rules."

This second vector of the marketing/finance feedback loop was predicated on the explosive growth of the pool of available risk capital during the bubble's expansion, demonstrated above. While propelling the inflation of the bubble at large, the influx risk capital into the volatile, winner-take-all internet sector also amplified the centrality of marketing practices within business and investment strategy and effectively funneled billions of dollars into advertising, online and off. Capitalized, incentivized, and in many cases directed by investors, a wave of dotcom companies allocated significant resources to the nascent online advertising sector, driving its expansion from the bubble's earliest stages through its peak. These developments helped legitimize the medium for traditional marketers who began to move online in earnest during the bubble's frenzy stage.

While online advertising represented a small fraction of overall ad spending at the start of the bubble, by 2001 it surpassed outdoor media and trade publications on its way to becoming the second largest media category in 2010.[98] As shown in figure three, throughout the bubble period online ad spending grew phenomenally. Annual outlays increased 240% from 1996 to 1997, 112% from 1997 to 1998, 141% from 1998 to 1999, and 75% from 1999 to 2000.[99] By comparison, total ad spending averaged about 20% annual growth during the decade of the 2000s and did not surpass 35% in any given year.

[98] Data compiled from Advertising Age DataCenter, "Domestic Ad Spending by Medium," *100 Leading National Advertisers: 2001 edition*, September 24, 2001, http://adage.com/article/datacenter/100-lna-2001-ed-index/106432/; Interactive Advertising Bureau, *2000 IAB Internet Advertising Revenue Report* (April 2001); Interactive Advertising Bureau, *2010 IAB Internet Advertising Revenue Report* (April 2011), 20.
[99] Interactive Advertising Bureau, *2000 IAB Internet Advertising Revenue Report* (April 2001).

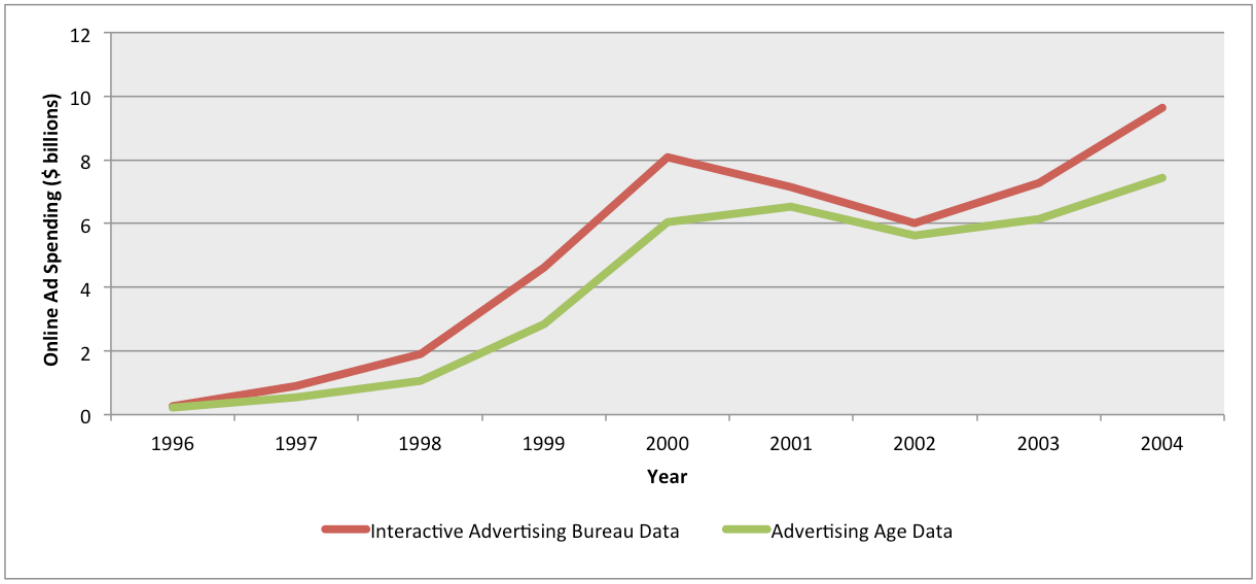

Figure 3. Online ad spending, 1996 – 2004.
Sources: Interactive Advertising Bureau, *2003 IAB Internet Advertising Revenue Report* (April 2004), 7; Interactive Advertising Bureau, *2004 IAB Internet Advertising Revenue Report* (April 2005), 7; Advertising Age DataCenter, "Top Advertisers By Media," *100 Leading National Advertisers: 1997-2005 Editions,* http://adage.com/article/datacenter-advertising-spending/100-leading-national-advertisers-index/106348/

Dotcoms led this growth as they relied extensively on advertising to drive traffic to their websites, increase brand recognition, and expand market share. In 1996, six of the top ten online advertising spenders were dotcoms (Excite, Netscape, Infoseek, Yahoo, Lycos, and CNET).[100] Infoseek spent 60% of its advertising budget online that year, while Yahoo spent nearly 100%.[101] In 1997, all but CNET again ranked among the top ten spenders. More generally, dotcoms and computer-related technology companies (such as Microsoft) accounted for over 50% of all online ad spending in 1996 and 1997 and did not dip below 40% until the first quarter of 1999.[102] All of these top advertisers save Microsoft received venture financing and/or held IPOs in 1995 or 1996. By another account, two thirds of online ad spending in the first half of 1996 "came from

[100] Advertising Age DataCenter, "Top Advertisers By Media," *100 Leading National Advertisers: 1997 edition*, September 29, 1997, http://adage.com/article/datacenter/100-leading-national-advertisers-1997-edition-index/106624/
[101] Galen Svanas, "Out of the box," *Brandweek*, June 9, 1997; Capital IQ financial databases; Yahoo, *1996 Annual Report*, 1, http://investor.yahoo.net/annuals.cfm
[102] Peter C. T. Elsworth, "Internet Advertising Growing Slowly," *The New York Times*, February 24, 1997; Bradley Johnson, "Advertising jumps 80% to $359 mil," *Advertising Age*, October 18.

marketers that [were] either web-based companies, telecommunications companies, or computer companies – all of which have nothing to lose and everything to gain by promoting a networked, computer-based medium."[103] Mirroring the larger investment bubble, online advertising spending entered into a period of strong and sustained quarterly growth in late 1998. Omitting the seasonally sluggish first quarter of 1999, quarterly growth from Q4 1998 to Q4 1999 averaged above 36%.[104] The only comparable period surpassing this level of growth was the earliest year of measured online ad spending in 1996 when total expenditures were much lower and large quarterly gains were thus easier to achieve.

Part of this trend can be attributed to traditional marketers, who began to take the web more seriously than ever before during the bubble's frenzy period. A reasonable proxy for this group is the Association of National Advertisers (ANA), whose membership draws heavily from the consumer packaged goods (e.g. Proctor & Gamble) and automobile (e.g. General Motors) industries and as such controls a large chunk of annual advertising spending. While a few ANA members experimented with online banner advertising and corporate websites as early as 1994, most were generally hesitant to move their ad dollars online in any systematic manner during this period. However 1999 proved to be a watershed year as online spending among ANA companies tripled from 1998 levels.[105] Data gathered by *Advertising Age* shows that while in 1998 just 19 of the largest 100 national marketers allocated funds for internet marketing, by 1999 that number had jumped to 87.[106]

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[103] "One-to-one marketing via Web," PC Week, November 11, 1996.
[104] Interactive Advertising Bureau, *2000 IAB Internet Advertising Revenue Report* (April 2001).
[105] Stuart Elliott, "A study says many traditional marketers are quickly becoming devotees of cyberspace," *The New York Times*, May 9, 2000.
[106] Advertising Age DataCenter, "100 Leading National Advertisers," *100 Leading National Advertisers: 1999 edition*, September 27, 1999, http://adage.com/article/datacenter-advertising-spending/100-lna-1999-edition-index/106380/; Advertising Age DataCenter, "100 Leading National Advertisers," *100 Leading National Advertisers: 2000 edition*, September 25, 2000, http://adage.com/article/datacenter-advertising-spending/100-leading-national-advertisers-2000-ed/106405/

This trend is not coincidental. There was a partial but growing consensus among marketers that the internet was coming into its own as a media channel and that they needed to establish online presences. The growing public profile of dotcoms factored into this logic. There were also advances in online advertising technologies and services that made it more feasible and attractive for traditional marketers to begin to take the online medium more seriously (discussed in detail in subsequent chapters). Yet, even as traditional marketers moved online, dotcoms extended their leadership within the web advertising market throughout the bubble's frenzy and into its decline. In just one example, Interpublic Group's Goldberg Moser O'Neill ad agency reported that its dotcom clients planned to spend in excess of $1 billion in the fourth quarter of 1999, roughly equivalent to the annual US ad spending of McDonald's and Burger King combined.[107] Total dotcom ad expenditures surged to an estimated $4 billion in 1999 from around $650 million in 1998.[108] In the first quarter of 2000, dotcoms were on track to spend between $7 and $10 billion for the year.[109]

One method for gauging a company's emphasis on marketing for a given time period is to calculate sales-and-marketing expenses as a percentage of revenue (SME rate). A study commissioned by *Advertising Age* in 1999 found that the dotcom sector had an SME rate of 94%, meaning that the average dotcom spent 94 cents on sales and marketing for every incoming dollar of revenue.[110] The subset of dotcoms classified as e-commerce sites averaged an SME rate of 109%.[111] While it is common for businesses to have high SME rates while starting out, the

[107] Hwang, "Growing Pains on the Web."
[108] Kate Fitzgerald, "Dot-coms: the critical upfront unknown," *Advertising Age*, May 15, 2000.
[109] Fitzgerald, "Dot-coms: the critical."
[110] Bradley Johnson, "Out-of-sight spending collides with reality" *Advertising Age*, August 7, 2000.
[111] Johnson, "Out-of-sight spending."

internet sector allocated inordinate amounts of resources to sales and marketing efforts compared to average estimated SME rates of between 25% to 40% for offline businesses.[112]

Average rates can be misleading in that they mask the range of data. SME rates for dotcoms varied extremely widely. For example, Amazon's expansive affiliate marketing system enabled it to keep marketing costs down and SME rates near 10%.[113] At the same time, other dotcoms spent at levels that far exceeded revenues. Postage retailer E-Stamp and home improvement solutions provider ImproveNet respectively spent nearly 17 and 15 times revenue on marketing.[114] Multiples such as these were excessive, but not entirely uncommon. During the bubble many dotcoms routinely posted quarterly SME rates of 200% or 300%.[115]

SME rates account for a variety of expenses, including the salaries of sales staffs. A more precise picture of dedicated advertising spending can be obtained through the advertising-to-revenue ratio (AR rate), whereby expenses are again expressed as a percentage of revenue. Unfortunately, few companies regularly report stand-alone advertising expenditures in public securities filings, making it nearly impossible to calculate AR rates for representative samples. The 166 Nasdaq-listed dotcoms that reported dedicated ad spending figures in 1999 yielded an average advertising-to-revenue ratio of 73%.[116] While the sample is imperfect, it represents a wide range of companies comprising about one-fourth of the total dotcom population. Yet again, the average AR rate of 73% is misleading due to an extremely wide data variance that ranges

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[112] Catherine P. Taylor, "E-business falls back to earth," *Advertising Age*, May 21, 2001.
[113] Dawn Kawamoto, "Dot-Commercials," *CNET*, February 21, 2000, http://news.cnet.com/Dot-commercials-Will-they-pay-off/2009-1017_3-237105.html?tag=mncol. Affiliate marketing is a system of advertising whereby web publishers are compensated based on directing traffic to a given site, often a retailer such as Amazon. In this way it is similar to pay-per-action advertising models such as cost-per-click.
[114] This is because they had marketing budgets, but hardly any revenues. Johnson, "Out-of-sight spending"; Taylor, "E-business falls back to earth."
[115] For example, Drugstore.com and Pets.com. Alice Z. Cuneo, "Tales of the Bizarre: Explosion of online companies advertising heightens pressure on agency relationships," Advertising Age, August 16, 1999; Debra Aho Williamson, *"*A dog's life," *Advertising Age,* August 7, 2000.
[116] Compiled from Bloomberg, Capital IQ, and Wharton Research Data Services (WRDS) financial databases.

from an astounding 2857% to less than one percent (standard deviation of 270%). Removing two major outliers from the group (QuePasa Corp at 2857% and iBeam Broadcasting at 1759%) reduces the average to 46%, but the standard deviation remains very high at 90%.[117]

Grouping the sample dotcom AR rates into terciles and comparing them with the same year AR rates of other business sectors provides a more accurate representation of the extent to which dotcoms used advertising as their primary marketing strategy. The bottom third produced a low average AR rate of 2%.[118] Many in this group were business-to-business companies, which traditionally have lower marketing costs. The middle tercile had an average AR rate of 13%, while the top tercile averaged 203%. With two outliers removed the top group's average fell to 125%, meaning advertising expenses were still greater than incoming revenues. Indeed, 24 of the sampled companies reported advertising costs that exceeded revenues for the year.

By comparison, offline retail and publishing industries (rough equivalents to the e-commerce and web publishing dotcoms in the sample) yielded an average AR rate of approximately 5%.[119] Of the 200 largest advertising spending industries, all but one produced AR rates below 15% in 1999.[120] These data make clear that the dotcom sector funded marketing efforts, and advertising in particular, at rates that far outpaced comparable offline business categories. As shown in tables one and two, selected dotcoms outspent selected leading national offline marketers by wide margins.

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[117] The median was about 12%.
[118] Ranges were as follows for bottom tercile (.06% to 5%), middle tercile (5% to 28%), and top tercile with (30% to 2857%) and without outliers (30% to 628%).
[119] Advertising Age DataCenter, "1999 Advertising-to-sales ratios for the 200 largest ad spending industries," http://adage.com/datacenter/datapopup.php?article_id=106573. Periodicals and newspapers, comparable to web publishers, had AR rates of 6% and 2.2% respectively. Sectors comparable to e-commerce ranged from 6.3% (apparel) to 0.7% (miscellaneous retail).
[120] That group was miscellaneous publishing, which includes directories, calendars, and greeting cards.

TABLE 1 Advertising-to-revenue ratio, selected online and offline retailers (1999).

Company	AR Ratio
HealthCentral.com	628%
VitaminShoppe.com	146%
Autoweb.com	63%
eBay.com	20%
Amazon.com	9%
Sears, Roebuck & Co. (#8 national advertiser, all media)	4%
Wal-Mart (#55 national advertiser, all media)	>1%

Sources: Annual Reports, Capital IQ financial database, and Advertising Age DataCenter, "100 Leading National Advertisers," *100 Leading National Advertisers: 2000 edition*, September 25, 2000, http://adage.com/article/datacenter-advertising-spending/100-leading-national-advertisers-2000-ed/106405/

TABLE 2 Advertising-to-revenue ratio, selected online and offline publishers (1999).

Company	AR Ratio
Audible.com	181%
AskJeeves.com	108%
Salon.com	98%
TheGlobe.com	47%
Yahoo.com	14%
Walt Disney (#11 national advertiser, all media)	6%
News Corporation (#34 national advertiser, all media)	4%

Sources: Annual Reports, Capital IQ financial database, and Advertising Age DataCenter, "100 Leading National Advertisers," *100 Leading National Advertisers: 2000 edition*, September 25, 2000, http://adage.com/article/datacenter-advertising-spending/100-leading-national-advertisers-2000-ed/106405/

High AR rates are partially explained by the fact that during the frenzy period some of the best-capitalized dotcoms expanded their marketing efforts into more costly offline media. The assumptions of Get Big Fast resonated with large-scale brand-building campaigns via established media channels. Prices rose among virtually all offline media as radio, outdoor, magazines, newspapers, and event marketing experienced a "mad rush" of dotcom demand for ad space.[121] This trend was most pronounced in television, where last-minute "scatter" ad

[121] Amanda Beeler, "Dot-coms' mad rush screeches to a halt; Outdoor forecast, *Advertising Age*, August 7, 2000; Adrienne W. Fawcett, "High-flying balloon loses altitude; Magazine forecast," *Advertising Age*, August 7, 2000; Amanda Beeler, "Dot-coms' focus on the bottom line reels in spending; Radio forecast," *Advertising Age*, August 7, 2000.

inventory was being purchased by dotcoms at premiums reaching 70%.[122] Dotcom spending on television jumped fivefold from 1998 to 1999, a trajectory that culminated when 17 of them purchased spots in the January 2000 Super Bowl at an average cost of $2 million.[123]

E-retailers such as WebVan, Value America, Home Grocer, and publishers/portals like CNET and AltaVista each announced $100 million plus ad campaigns.[124] CNET's 18-month campaign represented nearly 80 times its total advertising expenditures for its entire previous seven-year existence.[125] Online stockbrokers E*Trade and Ameritrade and the online divisions of TD Waterhouse and Charles Schwab all launched campaigns ranging from $100 to $300 million.[126] E*Trade alone increased its ad budget over 400% from 1998 to 1999.[127] Even the advertising trade press began to question the wisdom of certain dotcoms' "out of whack" advertising budgets.[128] Offline media ad buys factored significantly into the largest of these campaigns, which certainly drove up advertising-to-revenue ratios. Yet the majority of offline media spending came from a select group of the best-capitalized internet companies, many of which were the internet divisions of traditional companies such as Microsoft, publisher Ziff Davis, and two the aforementioned online brokerages.[129]

It might be assumed that the forays of high-profile dotcoms into television and other traditional media meant a decreased commitment to online advertising, yet this is not the case.

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[122] Chuck Ross, "The race to TV creates pain and gain for buyers," *Advertising Age*, November 01, 1999.
[123] Alice Z. Cuneo and Jennifer Gilbert, "E-volution: Dot-coms face the bottom line," *Advertising Age*, March 27, 2000; Wayne Friedman, "Dot-coms give commercials a break," *Advertising Age* August 7, 2000.
[124] "Mad.ave.dotcom," Advertising Age; Kawamoto, "Dot-Commercials."; Alice Z. Cuneo, "Milkman of cyberspace," *Advertising Age,* November 01, 1999; Debra Aho Williamson, "AltaVista paints 'smarter' pose to focus brand," *Advertising Age,* March 13, 2000; Jennifer Gilbert, "Dot-com doubt; Marketing jackpot in jeopardy as internet companies falter," *Advertising Age*, April 10, 2000.
[125] Debra Aho Williamson, "CNET ups visibility," *Advertising Age,* October 18, 1999.
[126] Gilbert, "Dot-com doubt."
[127] Ruby Roy Dholakia and David R. Fortin, "Advertising on the Net" in *Global Ecommerce and Online Marketing*, ed. Nikhilesh Dholakia, Wolfgang Fritz, Ruby Roy Dholakia, and Norbert Mundorf (Westport, CT: Quorum Books, 2002), 161.
[128] Johnson, "Out-of-sight spending."
[129] Jennifer Gilbert, "Dot-com shift; Spending trends," *Advertising Age* September 25, 2000.

While the trade and business press focused on the lavish offline media spending of select dotcoms, the average internet company still spent over one-third of its advertising budget online in 1999, which represented its largest media category by far.[130] By comparison Microsoft spent about 6.5% of its total ad budget online while traditional advertisers like General Motors and Procter and Gamble, who led online spending in terms of raw dollars, allocated just 0.6% and 0.3% respectively.[131]

All told, dotcoms contributed more resources to online advertising than any other group throughout the bubble period. Despite the growing presence of traditional advertisers, internet companies paid for over three-quarters of all internet advertising in early 2000, up from 50% in 1996.[132] And while they figured less prominently among the top ten online advertising spenders by 1999, dotcoms still represented over half of the top 200.[133] Although only intermittently available, ad impressions data demonstrates the extent to which dotcoms dominated online advertising, especially during the frenzy period. In the six months between April and September 1999, the top ten dotcom advertisers collectively purchased over 7.5 billion banner ad impressions, more than double the amount bought by the top ten offline advertisers over the same period.[134] For the full year of 2000, the top ten dotcoms purchased 79 billion ad impressions, nearly two-and-a-half times the top ten traditional advertisers' 33 billion.[135] Dotcoms procured ad space on leading websites such as Yahoo and *The New York Times*, who

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[130] Jennifer Gilbert, "Gaining Credibility and Trust Central to Online Strategies," *Advertising Age*, November 01, 1999; Bradley Johnson, "Buy.com shifts Net dollars, picks offline shop," *Advertising Age*, June 12, 2000.
[131] Advertising Age DataCenter, "100 Leading National Advertisers," *100 Leading National Advertisers: 2000 edition*, September 25, 2000, http://adage.com/article/datacenter-advertising-spending/100-leading-national-advertisers-2000-ed/106405/
[132] Kevin Featherly, "Traditional Firms Flock To Online Advertising," *Newsbytes*, November 20, 2000; Elsworth, "Internet Advertising Growing Slowly."
[133] Kevin Featherly, "Dot-Coms Dominate Online Ad Spending," *Newsbytes*, September 6, 2000. As new traditional advertisers such as Bank One and Ford joined early-comers like AT&T and Microsoft in moving portions of their huge advertising budgets online, the relatively under-capitalized dotcoms were displaced from the list.
[134] "Net Results," Advertising Age, [Interactive Supplement], November 1, 1999.
[135] "Net Results," Advertising Age, [Interactive Supplement], February 26, 2001.

often sold portions of their inventory directly. But it was also common for dotcom ad spending to flow through intermediaries like ad networks (e.g. DoubleClick) before reaching publishers.[136] Through these channels, dotcom ad spending was filtered down to lesser known web destinations, for example, as part of a network-wide ad buy.

The unprecedented level of dotcom advertising spending can be directly linked to risk capital investment. As one journalist observed, dotcoms "shovel[ed] money into advertising as fast as investors shovel[ed] it into dotcoms."[137] Public and private risk investors, working within the presiding economic rationality of Get Big Fast, provided the financial support and managerial leadership that allowed unprofitable and in many cases otherwise unsustainable internet ventures to funnel billions of dollars into online advertising. Propped up by risk capital, dotcoms maintained robust advertising budgets even as "burn rates" – the amount of money spent in excess of income each quarter – skyrocketed.[138] Venture capitalists in particular made advertising a top strategic priority among portfolio companies.[139] In November 1999, *Advertising Age* reported that "as much as 80%" of venture funding given to internet companies was being spent on advertising.[140] In an anecdotal example, the Silicon Valley VC firm Bessemer Venture Partners revealed that its portfolio companies were spending about half of their total budgets on advertising in 1999.[141]

For venture capitalists, advertising was a means to build valuation prior to exiting investments via IPOs or acquisitions. Execution of this strategy was dependent on managerial influence. As the *Wall Street Journal* reported in early 2000, "when it comes to the marketing

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[136] Seth Fineberg, "Dot-com sea change forces ad networks to rethink strategies," *Advertising Age*, October 30, 2000.
[137] Johnson, "Boom or bust?."
[138] Wolff, *Burn Rate,* 18.
[139] Tobi Elkin, "The powers that be: VC's new marching orders," *Advertising Age*, August 7, 2000.
[140] Williamson and Cuneo, "Flexing VC Influence."
[141] Hwang, "Growing Pains on the Web."

craze among web-based start-ups, the most powerful advertising executives aren't in the advertising business at all. They are the people of Sand Hill Road, Silicon Valley's venture-capitalist enclave."[142] In addition to receiving ownership stakes, venture capital firms typically assumed seats on the boards of funded companies and participated actively in business operations by "providing strategic counsel regarding development and production, making connections to aid sales and marketing efforts, and assisting in hiring key management."[143] The influential venture capitalist John Doerr readily acknowledged that his firm Kleiner Perkins "rarely participates in a deal unless it is the lead investor and gets a board seat."[144] At the same time, high net-worth advertising executives and dotcom entrepreneurs began joining venture capital firms in order to leverage their advertising experience to profit from the dotcom investment craze. *Advertising Age* reported in 2000 that at least ten of the magazine's former "digital media masters" – an annual list of internet marketing's rising stars – had gone on to work at VC firms.[145]

Venture capital firms exerted enough control over dotcom marketing strategy to provoke the ire of some in the advertising industry trade press. "To understand why so much dot-com advertising is flat-out bad, look no further than the Sand Hill Road Gang, pistol-hot venture capitalists who giddily find themselves with the power to execute their armchair advertising opinions. These same people eagerly sign off on marketing budgets that – like an internet company's stock-market valuation – have no relation to revenues or ROI but are pegged entirely to potential."[146] The piece went on to sketch the logic underpinning the prevailing VC approach

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[142] Suein L. Hwang, "Who's in Charge? The Dot-Com Blur," *Wall Street Journal*, February 16, 2000.
[143] National Venture Capital Association, *Venture Impact,* 11.
[144] Peltz, "High tech's premier venture capitalist."
[145] Debra Aho Williamson, "Show me the money," *Advertising Age*, November 6, 2000.
[146] Scott Donaton, "VCs had their fling as dot-com ad chiefs; now bring in experts," *Advertising Age,* February 21, 2000.

to marketing. "The generous view … has well-intentioned people making misguided marketing decisions because they don't know a thing about branding. The more cynical take … is that venture capitalists don't care a whit about building brands. Their only goal … is to build awareness in advance of an IPO. Then they can get their money out and move on."[147] Venture investors' focus on advertising was a rational business decision when understood in relation to the IPO exit strategy, Get Big Fast business model, and prevailing marketing-based asset valuation.

A recurring need to secure ever more investment funding and the constant pressure to maintain at least the appearance of forward momentum were important factors that reinforced publicly traded dotcoms' emphasis on advertising. Among the dotcoms in the top tercile of 1999 advertising-to-revenue ratios, over two-thirds held IPOs in that year. As noted, dotcoms frequently paired IPOs and major marketing initiatives in order to boost the impact of both.[148] And there is evidence as well that capital generated from IPOs went directly to fund advertising campaigns. E-Stamp publicly committed 65% of its $110 million IPO to "ads, marketing and brand-building" efforts.[149] In the same vein, online insurance peddler HealthExtra used its IPO to finance a $25 million ad campaign.[150]

The default response to faltering share prices or investor relations problems was often a renewed focus on marketing efforts: a rebranding campaign, a series of full-page print ads in leading newspapers, etc.[151] In some cases, the inflated stock valuations of companies with little cash on hand became a kind of transactional currency to finance ad campaigns.[152] In what by

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[147] Donaton, "VCs had their fling."
[148] "Oracle to Break $100 Million Effort," *Advertising Age* November 1, 1999; Tobi Elkin, "Expedia puts up $50 mil to build travelers' trust," *Advertising Age*, January 17, 2000.
[149] "Encyclopedia Britannica Rolls $37 Mil Campaign," *Advertising Age* October 25, 1999.
[150] David Goetzl, "Spokesman Reeve stars in effort for disability insurer," *Advertising Age* February 21, 2000.
[151] Hwang, "Growing Pains on the Web."
[152] Stock was also widely used to fund mergers and acquisitions, as discussed in chapter three.

early 2000 was a "commonplace" practice, Pets.com offered equity to Walt Disney in exchange for nearly $12 million in television time on its ABC network.[153] Advertising agency GSD&M went so far as to form a new division focused solely on bartering marketing services for equity stakes in internet start-ups. According to the agency's president, "The basic premise is we provide venture ideas, venture marketing, and venture creative for equity."[154]

In raw dollars, dotcom ad spending retreated abruptly as the Nasdaq made its descent. Offline media budgets were slashed as market valuations bottomed out, sources of capital dried up, and investment partners and executive boards tightened the reigns on marketing in general. Yet even as the bubble began to collapse in 2000, dotcoms accounted for roughly half of online advertising spending, while cutting their offline media budgets severely.[155]

The New Economy Ideology of Investment and Business Management

Dotcoms' tremendous emphasis on advertising was an outgrowth of the broader integration of marketing and finance, which had material as well as ideological manifestations. At one level, dotcom ad spending was bolstered by changes in concrete practices of financial asset-valuation. More generally, it was the outcome of the prevailing New Economy ideology of investment and business management. In this regard it becomes important to consider the justifications for rampant online ad spending and the "frame of representation" that coordinated the actions of the social actors involved.[156] Following James Carey and John Quirk, David Nye, Susan Douglas, Vincent Mosco and others, it is important to understand the ideologies/discourses/mythologies that underpin technological and economic system development.[157] For example, Mosco points to

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[153] Williamson, *"*A dog's life."; Beth Snyder, "GSD&M swaps work for equity in Net start-ups," *Advertising Age*, November 15, 1999.
[154] Snyder, "GSD&M swaps work for equity."
[155] Featherly, "Traditional Firms."
[156] Patrice Flichy, *The Internet Imaginaire* (Cambridge: MIT Press, 2007), 1-2.
[157] James W. Carey and John J. Quirk, "The Mythos of the Electronic Revolution," The American Scholar, 39, no. 3 (Summer, 1970), 395-424; David Nye, *American Technological Sublime* (Cambridge: MIT Press, 1994); Susan

the "myth of the digital sublime" as an essential factor in the dotcom bubble's growth. People continued to buy the stocks of unprofitable companies that showed no indication of becoming profitable in the future because they "believed, among other things, that '.com' after a firm's name conferred a mythical power that allowed the firm to transcend accepted marketplace conventions. … What made the dotcom boom a myth was not that it was false but that it was alive, sustained by the collective belief that cyberspace was opening a new world by transcending what we once knew about time, space, and economics."[158] Advertising was certainly one of the principle forces that animated the myth of the digital sublime and thus the bubble's inflation.

For publicly traded but unprofitable dotcoms, advertising seemed to be one of the only ways to attract new investors and keep current ones appeased (at least in the short term). As dotcoms "plaster[ed] ads everywhere consumers might turn," they hoped "to catch investors' eyes too."[159] They were often as interested in selling stock as in selling products, precisely because they required huge amounts of capital to pursue Get Big Fast. They had to focus on attracting customers in the traditional sense, while also attending to the demands of a different set of clients: investors and stockholders.[160] A portfolio manager with the institutional investor Neptune Capital Management spelled out what these "new clients" cared about most: "In the internet world, you have to look for the dominant player. We're not looking for profitability. Now, we're only looking for growth."[161]

Douglas, *Inventing American Broadcasting, 1899-1922* (Baltimore: Johns Hopkins, 1987); Vincent Mosco, *The Digital Sublime: Myth, Power, and Cyberspace* (Cambridge: MIT Press, 2004).

[158] Mosco, *The Digital Sublime,* 3-4.

[159] Hwang, "Growing Pains on the Web."

[160] Snyder, "Pre-IPO Branding Essential."

[161] Judith Messina, "Double-time DoubleClick Acquisition Strategy," *Crain's New York Business*, July 19, 1999.

Growth can occur across various dimensions such as increasing staff, expanding operations, investing in technology, and buying competitors. And while dotcoms pursued these methods to varying degrees, their core strategy was to expand sales and marketing efforts, particularly through advertising and public relations, even as they lost vast amounts of money quarter after quarter. While some industry observers chalked this up to "the topsy-turvy logic of the web," there was clearly a strong ideological dimension at play.[162] Spending your last dime on advertising was rational in an economic context where mindshare and market share, measured by "usage metrics" such as website traffic, were paramount indicators of value and gateways to further investment capital.[163] As *Fortune* magazine reported, what mattered were "drivers of growth … not pesky little annoyances like quarterly earnings or even revenues. Which means that if budget-busting advertising campaigns or product giveaways are what it takes to propel your company into the ranks of web giants, well, that's okay. … Profligacy pays."[164] For dotcoms seeking success in the New Economy, advertising was perhaps the sole mandatory expense.[165]

This history demonstrates the material consequences of business ideology, but we cannot discount the opportunities for enormous returns afforded to risk investors once the bubble was set in motion. The self-interested risk capital sector was a central engine of dotcom advertising expenditures and the bubble at large. Venture capital firms and investment banks propelled and exploited the speculative mania as they collected substantial investment payouts and service fees. As one journalist noted, "Instead of using the stock market to build companies, venture

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[162] Hwang, "Growing Pains on the Web."
[163] Morgenson, "How Did They Value Stocks?."; Patricia Riedman, "After the crash: Where from here?," *Advertising Age* August 7, 2000.
[164] Fox, "Net Stock Rules."
[165] There are important connections to be drawn between this trend and the concurrent "hollowing out" of manufacturing corporations observed by Naomi Klein, who argues that during the 1990s the corporate brand became the centerpiece of global capitalism. Naomi Klein, *No Logo: No Space, No Choice, No Jobs,* Tenth Anniversary ed. (New York: Picador, 2010).

capitalists and entrepreneurs use[d] companies to create stocks," a strategy that was remarkably profitable and implemented in large part through advertising.[166] At the height of the bubble in 1999, US venture capital firms realized a "staggering return" of 147% in contrast to the average return across all sectors of the economy that ranged from a low of 2% in 1990 to a high of 44% in 1995.[167] Thus, Nigel Thrift's contention that "it's the romance, not the finance" requires a minor alteration: it's the romance *and* the finance.[168]

Conclusion

The financial bubble became a self-perpetuating system in which the most important business competency became attracting investment capital. This was achieved to a significant degree through marketing practices such as advertising and public relations, whereby companies sought to demonstrate their potential to become dominant in a given online market, to Get Big Fast. Dotcoms with a strong market position and positive media profile found it much easier to attract investors, while securing risk capital through IPOs and other means functioned as public relations events in their own right. At the same time, those with investment funding spent heavily on advertising to further build market share and enhance brand image, which in turn aided fundraising. This powerful feedback loop between marketing and finance had the effect of rapidly increasing the scale and scope of online marketing activities during the bubble period. Dotcom ad spending in particular drove demand within the emerging online advertising market and contributed to medium's legitimation as a channel for commercial messages. The next chapter considers the relationship of the financial bubble and online advertising service providers such as DoubleClick.

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[166] Cassidy, *Dot.con*, 241-244.
[167] Barrow, "Internet firms: what strategic changes have to be managed?," 79.
[168] Thrift, "It's the romance, not the finance."

Finally, it is worth briefly noting the impact of this surge of advertising on the financial bubble at large. Taking a step back, it is reasonable to conclude that dotcoms' relentless pursuit of "mindshare" helped fuel the bubble itself as widespread media coverage of internet investment "success stories" prompted greater speculation. The financial news media and 24-hour cable news channels in particular played an important role in "pumping and publicizing the money machine."[169] Compromised business journalism perpetuated and amplified the bubble as coverage of technology stocks became a cultural spectacle that encouraged greater popular participation in investment markets.[170] As *Advertising Age* observed, the stock market was being propelled by brand names "and since brand names are driven by advertising, advertising is driving the stock market."[171]

The new online stock brokerages such as E*Trade and Ameritrade, themselves among the largest dotcoms, fueled the bubble even more directly by running massive advertising campaigns to persuade individuals to invest in internet stocks via online trading services. As Michael Indergaard notes, "It was a linking up of the new media with the financial sector and old media in the late 1990s that led large numbers of people to believe that dotcom start-ups were carriers of revolutionary change – and worth $100 or more a share."[172] In June 1999, the chairman of the SEC, Arthur Levitt, excoriated the online brokerages for producing advertising that "more closely [resembled] commercials for the lottery than anything else."[173] Singling out one television spot that featured a working class truck driver who had purchased a tropical island with proceeds from his securities trading, Levitt argued that such promises of instantaneous

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[169] Kurtz, *The Fortune Tellers,* xvii, xxi.
[170] Cassidy, *Dot.con*, chapter 12. See also Kurtz, *The Fortune Tellers;* Thrift, "It's the romance, not the finance."
[171] Rance Crain, "AOL's 'big bang' of a mega-deal more proof of ad, brand power," *Advertising Age*, January 17, 2000.
[172] Indergaard, *Silicon Alley*, 56.
[173] Hal Lux, "Keeping on-line ads in line," *Institutional Investor*, 33, no. 6 (June 1999), 29.

wealth were highly disingenuous. Even if the immediate effects of such campaigns on popular investment difficult to demonstrate, a culture saturated in such advertising "sets up a new background in which investing is a normal practice."[174] This is the same culture in which President George W. Bush attempted to rally popular support for privatizing social security investment, and the same in which, after massive government bailouts of corrupt investment banks, citizens organized to Occupy Wall Street in an altogether different manner. In this sense, Get Big Fast and Too Big To Fail are intimately connected in ways that merit further analysis.

[174] Thrift, "It's the romance, not the finance," 424.

Chapter 3

The Dotcom Bubble and Online Advertising Infrastructure

While chapter two focused on the dotcom bubble's generation of online advertising demand, this chapter demonstrates the importance of speculative investment to the development of the two most important companies the emerging online advertising sector, DoubleClick and its main competitor, CMGI. Case studies are presented that show how these companies' deep integration with financial markets enabled them to pioneer a business model that propelled the medium to a new level of growth as an advertising channel. Carrying over the themes of "risk capital" and the Get Big Fast business model from chapter two, this chapter delineates how financialization operated in the very heart of online advertising's construction.[1]

DoubleClick and CMGI were among the first and most successful online ad companies to integrate diversified service offerings into a comprehensive strategy of *online advertising infrastructure provision*. As DoubleClick's CEO Kevin O'Connor put it, the goal was to become "the internal operating system for advertising on the net."[2] Following this model, a core group of *infrastructure providers* improved and expanded their service offerings in an attempt to become essential intermediaries within the growing online advertising market. Buoyed by risk capital, these companies transformed a critical mass of the web into a mainstream advertising platform that became centered on consumer surveillance.

Deeply entwined in public and private investment markets, DoubleClick and CMGI in particular leveraged their outsized financial valuations during the bubble's upswing to bankroll what amounted to an advertising infrastructure arms race. Each company expanded its

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[1] As explained in chapter two, I use the term *risk capital* to refer to a form of highly speculative and often short-term investment whereby funds are rapidly deployed in order to obtain above-average returns.
[2] Howard Kurtz, *The Fortune Tellers: Inside Wall Street's Game of Money, Media, and Manipulation* (New York: Free Press, 2000), 179.

operations, most notably through stock-based mergers and acquisitions, and dramatically scaled up its capabilities to deliver ads and collect consumer data. In the four years since its formation in 1996, DoubleClick increased ad serving capacity by more than 450 percent, serving some 621 billion ads in 2000.[3] That same year, both DoubleClick and CMGI estimated that over half of all internet users had encountered one of their campaigns.[4] The first part of this chapter presents the case studies of DoubleClick and CMGI, detailing their growth via financial markets. The second situates these cases within the framework of infrastructure provision. Surveillance-based advertising practices are addressed in chapter four.

DoubleClick: "Godfather of the ad services game."[5]

As Michael Indergaard observed in his study of New York City's Silicon Alley district, DoubleClick's "prowess for developing technology was matched by a knack at raising capital."[6] The company was formed during the early stages of the dotcom bubble and came of age as it reached its most dynamic period, roughly late 1998 to early 2000.[7] DoubleClick's executives were skilled fundraisers and online advertising evangelists. Co-founder and CEO Kevin O'Connor was an outspoken entrepreneur who saw securing investment capital as essential to DoubleClick's success and understood the value of public relations for fundraising.[8] Kevin Ryan, hired in 1996 as Chief Financial Officer and later succeeding O'Connor as CEO in 2000, was a former investment banker and Senior VP of Business and Finance at United Media, a syndication service of newspaper conglomerate E.W. Scripps.[9]

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[3] DoubleClick, *2000 Annual Report*, 4.
[4] Federal Trade Commission, *Online Profiling: A Report to Congress* (June 2000), 3.
[5] Steven Vonder Haar, "Data chase," *Adweek*, September 6, 1999.
[6] Michael Indergaard, *Silicon Alley: The Rise and Fall of a New Media District*, (New York: Routledge, 2004), 51.
[7] See Chapter two for periodization of the bubble.
[8] Kevin O'Connor. *The Map of Innovation: Creating Something out of Nothing* (New York: Crown Business, 2003).
[9] Judith Messina, "New Media's Hot Play: DoubleClick Infusion Largest Ever in City," *Crain's New York Business,* June 16, 1997.

Under O'Connor and Ryan's leadership DoubleClick embraced a business strategy that relied upon persistent risk capital acquisition as the foundation for aggressive expansion; this was the dotcom Get Big Fast model of development. In June 1997 DoubleClick secured its first private financing in the form of a $40 million venture capital investment.[10] The money was used in part to buy back a large chunk of ownership from its parent company, the advertising holding firm Bozell, Jacobs, Kenyon & Eckardt.[11] It also bestowed a seal of approval from the investment community, adding cachet to DoubleClick's brand and to the unproven online advertising market more generally. The investment was the largest private financing for a dotcom start-up outside of Silicon Valley to date, valuing DoubleClick at over $100 million and making it "far and away" the most exciting internet company in the New York area in the eyes of the business press.[12]

DoubleClick emerged as a pioneer of New York's burgeoning web start-up scene, "setting benchmarks for risk-taking" and catalyzing a wave of dotcom investment from traditionally more conservative east coast venture capital firms.[13] Capitalizing on the stock market's simmering infatuation with internet companies, DoubleClick held an IPO just eight months after receiving venture financing.[14] The February 1998 offering provided the company with another $62.5 million and generated further positive publicity. In what was described as "one of the hottest IPOs of the year," DoubleClick's stock rose 57% on the first day of trading, valuing the company at more than $400 million.[15]

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[10] John T. Mulqueen, "DoubleClick Wants To Hit Big Button," *Internet Week*, December 22, 1997.
[11] Mulqueen, "DoubleClick Wants To Hit."
[12] Messina, "New Media's Hot Play."
[13] Judith Messina, "Kevin O'Connor and the mouse that roared," *Crain's New York Business*, May 15, 2000, 30.
[14] Messina, "Kevin O'Connor and the mouse that roared."
[15] Mark Walsh, "DoubleClick clique expands as Internet's appeal boosts IPO," *Crain's New York Business,* February 23, 1998.

An investment metric called the price-to-sales ratio (P/S ratio) provides an indication of how much Wall Street values every dollar of a given company's sales.[16] It is also a standard measure for comparing the value of stocks. To get a sense of the excitement generated by DoubleClick, consider that the company's P/S ratio was around 14 at the time of its IPO (i.e. every dollar of annual revenue was represented by 14 dollars of share value). This is far beyond the 1.8 average P/S ratio of companies listed on the S&P 500 index at the time.[17]

Taking advantage of the dotcom bubble's growing fervor over the next two years, DoubleClick issued three additional follow-on equity offerings (releasing additional stock to public markets) and completed a one-time debt offering of short-term bonds.[18] These fundraising efforts were highly lucrative, netting DoubleClick an additional $1.1 billion in risk capital and placing it among the best-capitalized and highest-profile dotcom companies.[19] Like many of the dotcoms described in chapter two, DoubleClick used public relations and trade advertising as fundraising tools.[20] As O'Connor told *Advertising Age*, "clearly the stock market has an insatiable appetite for internet stocks, but it's important to make sure [the investment community] know[s] what your company is about and what you do."[21] As such, O'Connor promoted DoubleClick in outlets such as the *New York Times, Forbes*, *Fortune*, and the CNBC cable network.[22] In addition to its media prowess, DoubleClick was the technology leader in the ad network sector, which proved beneficial for attracting investors. "What makes them unique is

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[16] The P/S ratio is market capitalization divided by most recent annual revenues (equivalently calculated by dividing the per-share stock price by per-share revenue).
[17] Available data is from 2000, so not comparable in exact terms. VectorGrader, "Price to sales (ttm)," http://www.vectorgrader.com/indicators/price-sales
[18] "Convertible subordinated notes" are short-term bonds that can be converted into common stock.
[19] DoubleClick, *2000 Annual Report*, 48. Cash flow data from CapitalIQ financial database.
[20] DoubleClick reportedly hired a public relations firm four months into existence, as O'Connor was a "huge believer in the importance of public relations." O'Connor also made a habit of leaking the news of DoubleClick mergers to the *Wall Street Journal* in order to create a credible "press release for the rest of the media." See Kurtz, *The Fortune Tellers*, 119, 177-8.
[21] Beth Snyder, "Pre-IPO Branding Essential for Web Companies," *Advertising Age* August 24, 1998.
[22] Kurtz, *The Fortune Tellers*, 118-9.

their ability to target an audience and deliver volume to advertisers," remarked a DoubleClick auditor.[23] "No one else is doing it in nearly as sophisticated a fashion."[24]

"Flush with cash and possessing a highly touted stock," DoubleClick set out to "dominate the internet advertising business" by pursuing the Get Big Fast business model associated with New Economy dotcom companies.[25] DoubleClick outlined the specifics of its plan for expansion in its annual reports, stating repeatedly between 1997 and 2000: "The company expects to significantly increase its operating expenses in order to expand its sales and marketing operations, to continue to expand internationally, to upgrade and enhance its DART technology, and to market and support its solutions."[26] As explained by O'Connor, "It's clear what the market's telling us. They want to give us a lot of money, so we take it and we invest. … Why? Because this is the biggest thing that's ever hit. Market share is everything."[27] As described in chapter two, rapid growth was imperative in the context of the rising financial markets and winner-take-all business mentality. The ultimate goal of Get Big Fast was to reap monopoly profits by squeezing out competition.

Risk capital propelled DoubleClick's growth. When it separated from Poppe Tyson in 1996, DoubleClick employed 13 people at a single location.[28] Shortly after receiving venture financing the staff was expanded to over 100 and the company relocated to a high-rise at Madison Avenue and 26th Street, the heart of what became known as Silicon Alley.[29] Upon its IPO DoubleClick began rapidly opening new business locations both domestically and

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[23] Messina, "New Media's Hot Play."
[24] Messina, "New Media's Hot Play."
[25] Judith Messina, "Double-time DoubleClick Acquisition Strategy," *Crain's New York Business*, July 19, 1999; See Chapter 2 for more detailed explanation of "Get Big Fast."
[26] DoubleClick, *1997 Annual Report*, 4. Language also appears verbatim in 1998, 1999, and 2000 reports.
[27] Judith H. Dobrzynski, "C.E.O ROUND TABLE; Online Pioneers: The Buzz Never Stops," *New York Times*, November 21, 1999. Emphasis added.
[28] DoubleClick, *1997 Annual Report.*
[29] One reason the area became popularly known as Silicon Alley is that DoubleClick sponsored a large billboard near its offices saying "DoubleClick welcomes you to Silicon Alley." Messina, "New Media's Hot Play."

internationally.[30] Bolstered by repeated infusions of investment capital, the company established offices or formed joint ventures in some 30 overseas locations throughout Europe, Asia, and Latin America in a period of about two years.[31] At the close of 1998, DoubleClick employed 482 people, 293 of whom worked in sales.[32] By the end of 2000 DoubleClick's workforce had grown to nearly 2,000 with a sales staff of 1,040 people, including 380 working internationally.[33] During this period DoubleClick also directed significant resources to its core technology systems for ad serving and consumer profiling, including developing redundant capacity for emergency systems failure scenarios and investing in server architecture upgrades.[34] By late 1999 the company maintained about 650 ad servers across 20 data centers housed in the US and abroad.

DoubleClick's most important expansion strategy was the pursuit of mergers, acquisitions, and strategic partnerships with direct competitors and companies in related sectors of online advertising such as email marketing. Purchasing rivals offered a way to secure horizontal market power by limiting competition directly, while expanding into analogous business sectors provided opportunities to create vertical market power in the form of barriers to entry and lowered operational costs.[35] A concurrent wave of mergers and alliances in the media and telecommunications industries was ongoing in the wake of the Telecommunications Act of

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[30] It is significant that DoubleClick and others moved very quickly to expand internationally. This extra-territorial dimension of dotcom expansion warrants further analysis. For example, pursuing nascent overseas markets dovetails with the explicitly transnational orientation of the Clinton administration's policy approach outlined in the Framework for Global Electronic Commerce. See Chapter five.

[31] David P. Baron, "DoubleClick and Internet Privacy [Stanford Graduate School of Business Case no. P-32]," August, 2000; Judith Messina, On-line Networks Confront Survival of the Clickest," *Crain's New York Business*, January 12, 1998.

[32] DoubleClick, *1998 Annual Report*, 7-9.

[33] DoubleClick, *2000 Annual Report*, 12.

[34] Mitch Wagner, "Ad Agency DoubleClick Heads Off Downtime With Redundant Systems," *InternetWeek*, September 13, 1999.

[35] Market power is the ability to increase profits by subverting price competition. Exercised horizontally, it directly limits the competition in a given market. Vertical market power is a company's ability to secure strategic advantages in access to and dealings with suppliers and customers (or, upstream and downstream vertical markets?). "Vertical and horizontal competition and market power are closely intertwined and reinforce each other." Robert Livingston Steiner, "Vertical Competition, Horizontal Competition and Market Power," *Antitrust Bulletin,* 53, no. 2 (Summer 2008).

1996.[36] A key distinction here is that virtually no money changed hands in the execution of DoubleClick's transactions. Instead, stock was the primary currency.

As more and more risk capital poured into the dotcom sector during 1998 and 1999, the value of individual stocks rose sharply. This was especially true for top-tier companies like DoubleClick, whose market capitalization – the total value of its outstanding shares – increased dramatically from $424 million at the end of 1997, to $1.9 billion at the end of 1998, to $10.7 billion at the end of 1999.[37] In the context of the bubble's inflation, market capitalization readily translated into purchasing power. Inflated share prices made it easier to conduct stock-based mergers and acquisitions. In this manner, rising financial markets contributed directly to DoubleClick's enlargement (and, as will be shown, that of its rivals). In October 1999 DoubleClick acquired NetGravity, a major competitor, fully financing the transaction an exchange of $530 million in stock.[38] The takeover increased DoubleClick's customer base of web publishers by 50%, adding 350 new clients including high-profile sites such as CNN.[39] It also made DoubleClick the ad services provider for more than half of the top 50 web publishers, solidifying its status as the dominant player in the market.[40]

One month later, despite heavy opposition from privacy advocacy groups, DoubleClick finalized a merger with the marketing database company Abacus Direct in another stock deal worth $1.7 billion.[41] It was DoubleClick's intention to combine Abacus' consumer purchasing

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[36] Robert W. McChesney, *Rich Media, Poor Democracy: Communication Politics in Dubious Times* (New York: New Press, 2000).
[37] CapitalIQ financial database.
[38] Courtney Macavinta, "DoubleClick, Abacus merge in $1.7 billion deal," *CNET*, November 24, 1999, http://news.cnet.com/2100-1023-233526.html
[39] Messina, "Double-time DoubleClick Acquisition Strategy."
[40] Mark Walter, "DoubleClick merges with NetGravity," *Seybold Report on Internet Publishing*, 4, no. 1 (September 1999), 24.
[41] Macavinta, "DoubleClick, Abacus merge." This case is discussed in detail in chapter five.

profiles with its own profile database in order to improve its ad targeting capabilities.[42] Stock-based transactions of this nature were self-perpetuating in the sense that they sent share prices upward, providing even greater purchasing power to the combined entity.[43] As one dotcom CEO told *Fortune*: "valuation is a sign that investors are actually rewarding us for being aggressive."[44]

In early 2000 DoubleClick again exchanged its stock for a 30% stake in the leading discount ad network ValueClick.[45] The move was significant because it established "a beachhead for DoubleClick in the emerging cost-per-click advertising model," a market segment in which it had previously not maintained a significant presence.[46] Other smaller DoubleClick acquisitions of the period included Opt-In Email and FloNetwork, providers of e-mail marketing services, Flashbase, an online sweepstakes servicer, and @plan, which offered research services for online media buyers. Through this series of stock-based transactions, the biggest fish in the online advertising pond rapidly grew significantly bigger.

CMGI: "The web giant nobody knows."[47]

DoubleClick's leading competitor during this period was the internet holding company CMGI. CMGI evolved out of College Marketing Group, Inc., a direct marketer of textbooks that was established in the 1960s. Struggling by the mid-1980s, the company was acquired by software developer David Wetherell in a leveraged buyout.[48] Changing the name to CMG Information Services (and later simply CMGI), Wetherell refocused elements of the company upon internet

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[42] Randall Rothenberg, "An Advertising Power, but Just What Does DoubleClick Do?," *New York Times*, September 22, 1999.
[43] David Jeffrey Alan Todd, "Politicizing Privacy: 'Focussing events' and the dynamics of conflict," (master's thesis, University of Victoria), 112.
[44] Justin Fox, "Net Stock Rules: Masters of a parallel universe," *Fortune*, June 7 1999, 66-72.
[45] A small percentage of the deal was cash. Indergaard, *Silicon Alley*, 90.
[46] "DoubleClick takes 30% stake in ValueClick," *Advertising Age's Business Marketing*, January/February 2000, 8.
[47] Paul C. Judge, "The Web Giant Nobody Knows," *BusinessWeek*, July 27, 1998.
[48] "Distinguished achievement citation: David S. Wetherell," Ohio Wesleyan University, May 19, 2001, https://community.owu.edu/pdfs/awards/DAC/Wetherell.pdf; For more on leveraged buyouts in the media sector, see Matthew Crain, "The rise of private equity media ownership in the United States: A public interest perspective," *International Journal of Communication*, 3 (2009), 208-239.

software development and led it through an IPO in 1994. Later that year and four months after Netscape released its Navigator browser to much fanfare, CMGI sold an early web browsing software product it had been building to the commercial online service provider America Online.[49] The stock-based deal netted CMGI $75 million on an initial investment of less than $1 million.[50] As a colleague later told a reporter, "That's when [Wetherell] knew he was on to something big."[51]

Wetherell split CMGI into two divisions, an operating group that managed wholly- and majority-owned subsidiaries, and an investment group, @Ventures that took minority interests in start-ups and functioned much like a traditional venture capital firm. Thus CMGI's business strategy incorporated elements from both the venture capital and holding company models.[52] On one hand, @Ventures focused on "spinning investments out to the public markets at substantially higher multiples than their purchase price."[53] On the other, all of CMGI's properties followed the holding company strategy of creating a portfolio of interlocking companies whose operations were meant to enhance one another's. Management gurus and the business press often described this model using labels such as "synergy," "virtuous circle," and the Japanese term "keiretsu."[54] Jargon aside, CMGI's unique business model embodied the deep assimilation of risk capital into the structure of the companies that sought to commercialize the emerging internet medium.

Beginning in 1995 CMGI made a series of "strategic investments" in internet companies, quickly amassing a sizable portfolio across a range of specialties including e-commerce,

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[49] Paul C. Judge, "Internet Evangelist," *BusinessWeek*, October 25, 1999, 140-148.
[50] Laton McCartney, "Guess who's paying for dinner?," *Upside*, April 1997, 100.; Carrie Lee, "CMG's Internet Investments Hit a Virtual Homer," *The Wall Street Journal*, March 2, 1998.
[51] Judge, "Internet Evangelist."
[52] The holding company model was established in the advertising industry in the 1980s and 1990s. John Sinclair, *Advertising, the Media and Globalisation* (New York: Routledge, 2012), 32.
[53] Christopher Thomas and Elizabeth Urban, "E-Commerce Building Blocks [Stanford Graduate School of Business Case no. EC-6]," May, 2000.
[54] Dennis Callaghan, "CGMI's Excellence @ Venture," *MC: Technology Marketing Intelligence*, August 1999, 22.

business-to-business services, publishers of content and community services, and, importantly, online advertising.[55] Using the proceeds from the AOL deal to fund its first major investment, CMGI licensed exclusive rights to web search engine technology developed at Carnegie Mellon University to create the internet portal Lycos, of which it owned 80%.[56] By the summer of 1996 CMGI had stewarded Lycos through a successful IPO, monetized the site through the sale of banner advertisements, and built up a stable of some 160 advertisers, including IBM, Hilton, Ford, and Disney.[57] CMGI also took an early stake in the personal homepage community GeoCities, which although unprofitable was quickly becoming one of the major online aggregators of online audiences.[58]

It was during this period in 1996 that CMGI began a sustained push to enter the nascent online advertising market, of which DoubleClick was the central player. Building upon his experience in direct marketing, software development, and CMGI's initial success with Lycos, Wetherell committed significant resources to develop a number of majority-owned subsidiaries and strategic investments in the area. The first of these was AdSmart, an ad network and stand-alone delivery system to compete with market leaders DoubleClick and NetGravity.[59] CMGI also invested in Freemark Communications, a provider ad-supported email services.[60]

CMGI's most consequential advertising investment grew out of its own Direct Interactive division, closely tied to CMGI's original area of business, direct marketing services. CMGI had been applying technology to marketing problems since it compiled mailing lists for textbook publishers in the late 1960s. By the 1990s, CMGI leveraged its expertise in computerized

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[55] Thomas and Urban, "E-Commerce Building Blocks."
[56] Callaghan, "CGMI's Excellence."
[57] CMGI, *1996 Annual Report*, 8.
[58] Judge, "Internet Evangelist."; Fox, "Net Stock Rules."
[59] Debra Aho Williamson, "Online ad managing heats up," *Advertising Age*, June 24, 1996.
[60] McCartney, "Guess who's paying."

databases to provide customized electronic marketing services including database construction, maintenance, analysis, and consultation to companies in variety of sectors.[61] Building on this foundation, CMGI launched Engage Technologies to focus exclusively on developing database technology for consumer profiling and targeted advertising on the web.

As noted, one of CMGI's principal investment strategies centered on forging alliances among its various holdings and it placed particular emphasis on creating so-called "synergies" among its advertising interests.[62] Its first notable attempt was a venture called Planet Direct that offered a suite of portal-like services such as email to small market internet service providers (ISPs). The ISPs could make Planet Direct's services available to their subscribers while giving CMGI the access and means to aggregate a sizable base of online consumers in order to deliver targeted ads using its AdSmart and Engage systems.[63] The service went live in March 1997 with 39 participating ISPs, a total pool of 560,000 subscribers, and advertising commitments from American Express, Maytag, and Lexmark.[64] In a similar manner, AdSmart and Engage were also used to deliver ads on the Lycos portal and other CMGI web properties.[65]

CMGI, like DoubleClick, utilized risk capital to fuel its growth and deployed marketing practices in order to attract investment. "Troll through the firm's press clippings and you'll see that CMGI's PR department has scored innumerable hits in publications as integral as *Upside*

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[61] CMGI, *1996 Annual Report*, 6-10.
[62] E.g. Lycos indexed GeoCities content in order to direct traffic to the site via search results, while Blaxxun Interactive, another CMGI investment, built 3D graphical versions of GeoCities "neighborhoods." McCartney, "Guess who's paying."
[63] "CMG to introduce new Internet service for access providers," *Wall Street Journal*, June 18, 1996; CMGI, *1996 Annual Report*, 10-11.
[64] Internet service links 39 providers, seeking advertisers. Ross Kerber, *Wall Street Journal*, March 10, 1997. Planet Direct was later rather unsuccessfully re-branded as the portal site MyWay.com. Jennifer Gilbert, "CMGI revamps MyWay mission," *Advertising Age*, May 8, 2000.
[65] Attempts to create virtuous circles did not always pan out. CMGI shuttered its Freemark email service after pairing it with GeoCities because it failed to "siphon enough visitors to justify the rates Freemark was charging its advertisers." McCartney, "Guess who's paying."

and *The Red Herring*, as well as in/on *Time* and CNBC," marveled one business analyst.[66] "Most tech and business publications cover their every move, and CEO David Wetherell seems to be on everybody's list of the top tech CEOs. *The Industry Standard* recently named him the second most influential tech investor behind only Bill Gates."[67]

In March 1998 CMGI was profiled in the *Wall Street Journal*. The piece highlighted the success of the company's internet investment portfolio, which had grown to include full or partial ownership of 22 businesses.[68] By this time CMGI had streamlined its strategy of buying dotcoms, priming them for acquisition, and bringing "an aggressive schedule of public offerings to market."[69] The company also attracted high-profile outside investors including Microsoft, which took a 4.9% ownership stake as part of a deal to purchase a small CMGI-owned web software development company.[70] Shortly thereafter Intel made a similar investment in CMGI for about $10 million.[71] Despite the fact that CMGI and its entire portfolio save Lycos were "racking up losses," CMGI's stock was up 58% on the year, during which the company continued to invest in online advertising, expanding the capacities of Engage and AdSmart and announcing plans to acquire yet another ad serving technology company, Accipiter.[72]

Like many dotcoms, CMGI's fortunes rose and fell along the trajectory of the larger internet stock bubble. As the market reached a fever pitch in 1999, the value of CMGI's portfolio soared. Wetherell continued to promote his companies "with the passion of a true zealot," even purchasing the naming rights to the newly constructed New England Patriots football stadium.[73]

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[66] Callaghan, "CGMI's Excellence."
[67] Callaghan, "CGMI's Excellence."
[68] Lee, "CMG's Internet Investments."
[69] Lee, "CMG's Internet Investments."
[70] "Microsoft Completes Purchase," *Wall Street Journal*, February 4, 1997.
[71] "Intel to Buy 4.9% Stake in CMG," *Wall Street Journal*, December 9, 1997.
[72] Lee, "CMG's Internet Investments"; "CMG Plans to Acquire Accipiter," *Wall Street Journal* March 13, 1998; Kipp Cheng, "CMGI's AdSmart spawns new consulting unit," *Adweek,* April 26, 1999, 54.
[73] The deal with the Patriots was later canceled in the wake of the crash. Judge, "Internet Evangelist."

CMGI was featured on the covers of *BusinessWeek* and *Fortune*, the latter of which dubbed it the "Berkshire Hathaway of internet investing."[74] Two investments in particular stood above the rest. CMGI's initial $4 million stake in Lycos was now worth $900 million, while GeoCities was in the process of being acquired by Yahoo, one of the premier dotcoms of the era.[75] That buyout turned CMGI's $6 million investment into $1.2 billion of Yahoo's shares.[76]

By October, the total value of CMGI's investments had swelled to $3 billion, up from just $160 million one year earlier.[77] These gains were reflected in the value of CMGI's own stock and that of its publicly traded subsidiaries. Drawn to Wetherell's track record, investors drove up CMGI's shares 700% on the year, shattering the gains of even Amazon (342%) and Yahoo (166%).[78] The "toast of both the Street and the Valley," CMGI's market capitalization approximated $10 billion, nearly matching its rival DoubleClick.[79] And like DoubleClick, CMGI threw the full weight of its financial valuation behind a push to become a "powerhouse in the rapidly emerging market for targeted advertising."[80] The company's primary tactic: leveraging its highly valued stock to make strategic acquisitions. In 1999 alone CMGI announced or finalized seven acquisitions of online advertising companies, all of which were financed through stock trades valued at nearly $2 billion.[81] The deals included a $700 million stock trade for the FlyCast media buying platform, $500 million in stock for the AdForce ad network, $518 million in stock for Yesmail, an email marketer, and $193 million in stock for AdKnowledge, a provider

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[74] Fox, "Net Stock Rules."; Judge, "Internet Evangelist."
[75] Though its ownership stake in Lycos had been diluted, it still controlled 20% of outstanding shares and a board of directors seat.
[76] Judge, "Internet Evangelist."; Callaghan, "CGMI's Excellence."
[77] Judge, "Internet Evangelist."
[78] Judge, "Internet Evangelist."
[79] Callaghan, "CGMI's Excellence."
[80] Judge, "Internet Evangelist."
[81] Throughout this period CMGI was also investing in areas outside of online advertising including ecommerce, online financial services, and various business-to-business services.

of ad targeting systems.[82] As the CEO of AdForce told *BusinessWeek* upon its acquisition: "CMGI wants to become one of the cornerstone players of internet advertising, and they are investing in the backbone pieces to do that."[83]

In the midst of these advertising-focused investments and acquisitions, CMGI put up an unprecedented $2.3 billion in stock to take an 83% controlling stake in the web portal AltaVista.[84] The purchase was widely seen as a direct assault on DoubleClick, which counted AltaVista as its most important client. Wetherell's intention was to end AltaVista's relationship with DoubleClick and provide the portal with ad targeting and profiling services from CMGI's own subsidiaries.[85] All told, CMGI's growth over the bubble's frenzy period was meteoric. In March 1998 CMGI's investment portfolio consisted of 22 companies.[86] By late 2000 it had grown to 70.[87] Likewise, the number of employees across all divisions grew from 505 at the end of its fiscal year 1996, to 1,024 in fiscal year 1998, to 6,000 in fiscal year 2000.[88]

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[82] Jennifer Gilbert, "CMGI's Web dealmaking hits big-time," *Advertising Age*, October 4, 1999; Stephen Lacey, "In the Net Ad Wars, CMGI Squares Off," *Mergers & Acquisitions Report*, December 20, 1999. In additional stock transactions of undisclosed values CMGI acquired the online advertising sales representation firm 2CAN media, I/PRO, a leading provider of website measurement, analysis, and auditing, and 1stUp.com, an ad-supported internet service provider. "CMGI Announces Third Quarter Financial Results," *Business Wire*, June 10, 1999; Kimberly Weisul, "Net investor CMGI readies raft of new offerings," *Inter@ctive Week*, March 8, 1999; Gilbert, "CMGI's Web dealmaking."

[83] Judge, "Internet Evangelist."

[84] Stewart Deck, "Alta Vista Stake Sold To CMGI for $2.3B," *Computerworld*, July 5, 1999.

[85] Immediately following the AltaVista purchase, CMGI launched a nine-month $120 million multi-media ad campaign, the first ever for the portal. Debra Aho Williamson, "AltaVista paints 'smarter' pose to focus brand," *Advertising Age*, March 13, 2000. Shortly after, it began another $35 million marketing campaign for its other portal holding, MyWay.com, a rebranded version of Planet Direct. Gilbert, "CMGI's Web dealmaking."

[86] Lee, "CMG's Internet Investments."

[87] Between 1996 and 2000 CMGI created six separate venture funds under its @Ventures division and began to accept outside investment from limited partners. Not limited to online advertising, CMGI invested widely across various internet sub-sectors including "eBusiness and fulfillment, Search and portals, Internet professional services, and Infrastructure and enabling technologies." The company's far-flung interests and unorthodox structure attracted attention from the SEC regarding "potential tax classification and government regulation as a mutual fund company." CMGI, *2000 Annual Report*, 22-23.; Norm Alster, "Can CMGI Stop the Bleeding?" *BusinessWeek*, September 25, 2000; Deck, "Alta Vista Stake Sold To CMGI."

[88] CMGI, *1996 Annual Report*, 13; CMGI, *1998 Annual Report*, 12; CMGI, *2000 Annual Report*, 4.

The Consequence of Risk Capital

The centrally important caveat underpinning the growth of DoubleClick and CMGI is that both companies were consistently unprofitable throughout this period. And not only were they losing money, but increasingly so. Here the parallels between the present case studies and the larger dotcom sector discussed in the previous chapter start to crystalize. Like the dotcom companies that utilized risk capital to spend lavishly on advertising, DoubleClick and CMGI fundamentally relied upon the bubble's inflation to power their own expansions.

While DoubleClick posted steady revenue growth throughout the bubble period, its losses grew at a much faster rate. Revenue increases stemmed from the absorption of clients from acquired companies and greatly expanded sales efforts, but these income sources were not enough to make the company profitable. Warnings regarding its "history of losses and anticipated continued losses" appeared consistently among the mandatory disclosures of risk factors contained in annual SEC filings.[89] Digging deeper, financial documents reveal that losses in 1999 more than doubled those from the prior year, while revenue grew at a significantly slower rate.[90] Indeed throughout the period DoubleClick's losses as a percentage of revenue climbed significantly, growing from 11% in 1997 to over 30% in 2000. CMGI too remained unprofitable during the period and by 2000 maintained a "burn rate" – industry jargon for negative cash flow – of around $50 million a month.[91] More revealing still, the company's two largest operations, AltaVista and Engage, were its loss leaders.[92]

Like many dotcoms, CMGI and DoubleClick maintained balance sheets that contrasted sharply with their stock market performances and attendant market capitalizations. By 1999

[89] "History of losses" appears as a risk factor in DoubleClick annual reports in 1998, 1999, 2000 and 2001.
[90] DoubleClick, *2001 Annual Report*, 26.
[91] Alster, "Can CMGI Stop the Bleeding?."
[92] Alster, "Can CMGI Stop the Bleeding?."

certain skeptical industry observers began to point out such discrepancies, although the fact remained for most investors that "no experience could get in the way of their enthusiasm."[93] "Even with the tremendous prospects for business on the internet," wrote *BusinessWeek*, "it's still hard at first glance to grasp what's driving CMGI's heavenly valuation" considering that its $10 billion market capitalization rested "on a minuscule base of $176 million in revenues and an operating loss of $127 million."[94] How was this possible?

At this point the answer should be no mystery. Risk capital functioned as an essential prop, a life-support system for an "industry without income."[95] Rising investment markets were sustained by the overriding speculative New Economy ideology that placed marketing practices at the center of asset valuation. This was a common thread that bound the dotcom web publishers and retailers that drove demand for online advertising and the companies like DoubleClick and CMGI that provided services within this market.

The fact that so many dotcoms perished in the bubble's collapse provides a measure of evidence regarding their overall reliance on investment capital. More concretely, CMGI directly applied funds from the sales of its appreciated investments in Lycos and GeoCities to finance its money-losing advertising operations such as Engage.[96] Likewise, DoubleClick used proceeds from its venture capital investments and public offerings for "general corporate purposes," including supplying "working capital" to maintain business operations.[97] Amazon's founder Jeff Bezos clarified the extent of the relationship, remarking that if "ecommerce had been subject to the regular discipline of the market, early set backs would have been fatal. But consumers were

[93] Michael Wolff, *Burn Rate: How I Survived the Gold Rush Years on the Internet* (New York: Orion, 1999) 144-5.
[94] Judge, "Internet Evangelist."
[95] Wolff, *Burn Rate*, 15. Technically, it was an industry without profits.
[96] Alster, "Can CMGI Stop the Bleeding?."
[97] DoubleClick, *1999 Annual Report*, 31.

not driving online commerce, Wall Street was."[98] While Bezos was talking specifically about online retailing, his observations hold true for the nascent web advertising market, and indeed the dotcom sector at large that, not incidentally, produced the greatest portion of demand for online advertising.[99] Risk capital kept the lights on.

Of course, more than simply shoring up otherwise bloody balance sheets, risk capital was the enabling factor that allowed DoubleClick and CMGI to aggressively expand despite the burden of sustained losses. While DoubleClick raised funds by repeatedly offering pieces of itself at the trough of the public stock market, CMGI primarily took the approach of engaging directly in speculative investment. Regardless of these tactical differences, the goal was the same: Get Big Fast. As the influential venture capitalist John Doerr noted, a major upshot of going public is that it provides an immediate boost to liquidity in order to pursue acquisitions.[100] Similarly, Candice Carpenter, CEO of web publisher iVillage, admitted that because investors "will accept losses at this juncture, we are able to rapidly acquire other companies and really build market share. This is a land grab."[101]

Again, DoubleClick's SEC filings provide evidence of the direct connection between speculative investment funding and growth. As reported in 1999, DoubleClick applied the $62.5 million raised via its initial public offering "toward the expansion of international operations and sales and marketing capabilities" in addition to financing general operating costs.[102] It is reasonable to conclude that subsequent risk capital infusions beyond the IPO were applied to similar purposes. How else could the company "significantly increase its operating expenses"

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[98] John Cassidy, *Dot.con: The Greatest Story Ever Sold* (New York: HarperCollins, 2002), 135.
[99] See chapter two.
[100] While cash is recognized as the most liquid asset, securities are also considered liquid as they can be sold rapidly in many cases with minimal loss of value. Michael Peltz, "High tech's premier venture capitalist," *Institutional Investor*, 30, no. 6 (1996), 89.
[101] Fox, "Net Stock Rules."
[102] DoubleClick, *1999 Annual Report*, 31.

year after year while continually losing money?[103] Recall also that DoubleClick raised roughly ten times more capital via follow-on offerings than it did in its IPO. Likewise, CMGI's core business model was "built on the stock market's enormous expectations for the internet."[104] As *BusinessWeek* put it: "As long as investors keep paying high prices for shares in his companies, [CEO] Wetherell will have the currency he needs to keep doing deals."[105] During the bubble's rise, CMGI held such currency in spades. Between 1999 and 2001, CMGI spent "a staggering $13 billion on acquisitions, nearly all paid for with its own stock," on an array of internet business including the advertising concerns discussed above.[106] What it did not do was turn a profit of any kind.

Reciting a mantra of New Economy ideology, Wetherell shrugged off concerns regarding profitability, maintaining that "it would be sinful to be making money on the internet right now, when it's growing this fast."[107] Interpreting this disregard for profits requires a nuanced consideration of the context. It was late 1999, the height of the bubble's frenzy period, and even with a $50 million monthly burn rate CMGI could afford to fund its businesses for another three years by digging into its war chest of roughly $2 billion in cash and marketable securities.[108] Pending market conditions, the safety net of risk capital was wide indeed.[109]

A critique of the argument presented thus far might contend that it is normal for companies to lose money to some degree when they are starting out. While this is true, in the past this unprofitable phase has normally occurred *in advance of* an IPO and subsequent stock

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[103] DoubleClick, *1997 Annual Report*, 4. This text also appears verbatim in reports from 1998, 1999, and 2000.
[104] Judge, "Internet Evangelist."
[105] Judge, "Internet Evangelist." This quote provides an indication of the growing realization among industry participants and observers that this level of growth was unsustainable, even as the investment frenzy mounted.
[106] Alster, "Can CMGI Stop the Bleeding?."
[107] Judge, "Internet Evangelist." Another version of this trope that comes into play in the last two chapters is: It would be sinful to regulate the internet right now, when it's growing this fast.
[108] Alster, "Can CMGI Stop the Bleeding?."
[109] Of course, market conditions changed drastically and CMGI was decimated in the crash.

market investment. Likewise, using investment capital to fund operations and expansion is a common business practice and in this respect the activities of DoubleClick and CMGI were not particularly noteworthy. Again, this is true to an extent, but what is important here is not the mere presence of risk capital. Rather, it is the massive scale at which it was integrated into the dotcom sector (see chapter two for data), the conditions of its accumulation and deployment (i.e. funding the growth a money-losing industry whose success was by no means preordained), and its central importance in the broader construction of an infrastructural mode of online advertising service provision, to which our attention now turns.

An Infrastructure for Advertising

DoubleClick and CMGI's expansion and investment binge cemented their joint status as the undisputed leaders of the growing online advertising services market. It also made them central protagonists in the grand New Economy experiment that hinged upon the Get Big Fast model of business development. As described in chapter two, the premise of Get Big Fast was to pursue rapid growth in order to secure dominant market share and build up barriers to entry while internet technology was still evolving. A useful way to understand the implications of this growth is to employ the concept of *infrastructure*, which in a general sense refers to the enabling or foundational components of some higher order system. There are two primary reasons why infrastructure is an appropriate lens. An emerging body of scholarship in "infrastructure studies" offers a set of analytics for thinking through the linkages between online advertising and the "context-specific" enabling technologies, business practices, and market relationships that have facilitated and shaped its development.[110] For example, the invisible nature of infrastructure is

[110] Christian Sandvig, "The Internet as Infrastructure," in *The Oxford Handbook of Internet Studies*, ed. William H. Dutton (Oxford: Oxford University Press, 2013), 90. I am not engaging with infrastructure studies in a sustained way in this dissertation; rather, I am using it as a lens through which to understand some aspects of online advertising's development.

framed as an important site of scholarly examination. Infrastructure studies directs attention beyond what is most immediate (e.g. pervasive web banner ads) to ask the question: "what does this activity depend on?"[111]

Secondly, as the bubble progressed the concept of infrastructure provision became a new touchstone around which DoubleClick and others explicitly reorganized their business models and publicity efforts.[112] This model built upon earlier ad network business practices and technologies such as centralized ad serving systems, but expanded beyond primarily serving web publishers to reach into all facets of the internet ad market. As DoubleClick's CFO Kevin Ryan put it: "We're an advertising infrastructure player. We sell internet advertising, deliver internet advertising, and provide direct marketing services for internet companies. We work with publishers and advertisers and try to make advertising work on the internet."[113] In this more concrete sense, the question raised by infrastructure studies is again useful: "what does this activity depend on?"

In addition to risk capital, the enabling and interrelated components of the infrastructure model were massive capacity for ad delivery and consumer profiling, diversification of services, and what DoubleClick CEO Kevin O'Connor called the process of "re-intermediation."[114] O'Connor coined the phrase to reappropriate the New Economy rhetoric of disintermediation, which promised to create "friction free" markets by connecting buyers and sellers directly.[115] By contrast, re-intermediation described DoubleClick's attempt to leverage its market position and

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[111] Sandvig, "The Internet as Infrastructure," 92.
[112] Ken Siegmann, "Unraveling a tangled Web," *PC Week*, April 15, 1996; Cathy Taylor, "The repping of the Web," *MediaWeek*, February 26, 1996, IQ20.
[113] Casey Kait and Stephen Weiss, *Digital Hustlers: Living large and falling hard in Silicon Alley* (New York: Regan, 2001), 116. Emphasis added.
[114] O'Connor. *The Map of Innovation,* 61.
[115] Matthew Crain, "The Cultural Logic of Search and the Myth of Disintermediation," in *New Times: Making Sense of Critical/Cultural Theory in a Digital Age*, ed. Cameron McCarthy, Heather Greenhalgh-Spencer, and Robert Mejia (New York: Peter Lang, 2011).

technology expertise in order to act as a "highly efficient" and effectively ubiquitous middleman in the online ad market.[116] At one level this was a rhetorical defense of DoubleClick's business model, but it also raised the stakes for ad service providers by articulating their function as essential intermediaries for the broadest possible range of ad-related transactions. Re-intermediation was about market building, exploiting the spoils of Get Big Fast. The goal was not only to "deliver every ad in the world to every consumer," but to broker all forms of marketing data exchange at every possible point of access.[117] O'Connor's articulation of the strategy was characteristically grandiose; true monopoly control was never achievable for DoubleClick or any other company. Nevertheless, infrastructure provision dovetailed with Get Big Fast to become a consequential guiding principle of online advertising development.

The infrastructure model was premised on applying technology-based efficiencies to all aspects of online advertising management and it encompassed services offered to ad agencies and marketers in addition to web publishers. These included consumer profiling and ad targeting as well as campaign planning, measurement, and analysis. For example, software-based tools for ad management quickly became far more efficient than manual ad placement. As early as 1996 Yahoo reported using NetGravity's system to go from a three-person staff managing five ad campaigns on 20 webpages to a team of two managing 70 campaigns on 16,000 pages.[118] As ad serving and management technology improved, the time delay for executing ad placements and

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[116] This idea of becoming the new "middle men" has a striking historical precedent dating back to the birth of modern advertising. In the first few decades of the 20th century newly formed ad agencies "opened up an economic space not previously demarcated and put themselves solidly in it." Richard M. Ohmann, *Selling Culture: Magazines, Markets, and Class at the Turn of the Century* (New York: Verso, 1996), 95. Finding some initial successes they began expanding from regional to national operations, set about selling themselves as indispensible to modern business, and switching their alignment from publishers to manufacturers (N. W. Ayer shifting to an open contract format led the way). Essentially "intermediaries took up positions in previously simpler market relations, and added complexity or mystery to certain exchanges of meaning, as ad men – and especially agencies – made their imperial move." Ohmann, *Selling Culture*, 104.

[117] Michael Schrage, "Kevin O'Connor," *Adweek*, January 18, 1999.

[118] Jeffrey M. O'Brien, "Feeling like a number?" *MC: Marketing Computers*, 16, no. 4, April 1996.

making campaign adjustments was effectively reduced to zero. Likewise, continued efforts were directed towards making it easier for publishers and ad agencies to integrate centralized ad services into their own local web servers and internal account management systems.

A persistent concern among marketers was that the online advertising market lacked standard processes and evaluative metrics. Services were disjointed and difficult to reconcile when procured from different providers. With a rapidly increasing range of options, "the challenge facing media planners" shifted from "finding sites on which to advertise to knowing which tools to use for help."[119] DoubleClick, CMGI, and others sought to meet these challenges in order to establish the legitimacy of the online ad medium and secure their places at the center of its market structure. This was a move to greatly expand upon their foundations as mere ad networks in order to become essential intermediaries for all online ad services – *infrastructure providers*. The infrastructure studies perspective would understand these developments as efforts towards standardization, a central facet of infrastructure and a key source of market power for the "strategic intermediaries" that preside over them.[120] One of DoubleClick's often-stated business objectives was to develop a standard toolkit for online advertising. Rather than simply serving targeted ads, DoubleClick positioned itself as "building the infrastructure that makes marketing work in the digital world."[121]

The finance-fueled mergers and acquisitions outlined above enabled DoubleClick and CMGI to grow their market share and broaden their service offerings in pursuit of these goals. Starting in late 1997, DoubleClick began to move beyond ad network sales representation,

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[119] Kim Cleland, "New Tools make it Easier to Buy Web Ads," *Advertising Age*, May 20, 1996.
[120] Steven J. Jackson, Paul N. Edwards, Geoffrey C. Bowker, and Corey P. Knobel, "Understanding Infrastructure: History, Heuristics, and Cyberinfrastructure Policy," *First Monday*, 12, no. 6 (2007). Quoted in Sandvig, "The Internet as Infrastructure," 98.
[121] "DoubleClick Inc.," *International Directory of Company Histories*, ed. Tina Grant (Detroit: St. James Press, 2002), 154- 157.

adapting its service model and expanding the offerings of its DART system.[122] The company had recently lost important early clients such as Netscape, *Playboy*, and Excite to rivals who licensed ad serving technology directly to publishers who wanted more control over their ad sales and operations. At the same time, DoubleClick saw more and more publishers inquire about "using its technology without its outside sales representation," prompting management to "begin rethinking its core business."[123] O'Connor was compelled to license DART as a stand-alone ad management tool to unaffiliated publishers while also relaxing the contractual terms for joining the DoubleClick network.[124] As O'Connor later stated, the decision to "split the technology out and sell it to our main competitors [e.g. publishers outside the DoubleClick network], almost ripped the company apart. It was like selling nuclear weapons to China."[125]

Once this process began, DoubleClick broadened its network to include new content areas and introduced greater flexibility into its services, offering generous revenue sharing terms with web publishers and experimenting with alternative pricing formats other than the traditional CPM.[126] Buffered by investment capital, DoubleClick could afford to pilot such programs at a loss. As one industry analyst put it: "DoubleClick wants to be in all those different spots, so it needed more flexibility. They wanted to be able to sell ad space from both the higher-end, site-specific approach as well as from the run-of-network, broad-reach approach."[127] Unsatisfied with serving mainly supply side markets (i.e. web publishers), DoubleClick developed a suite of services for advertising agencies and marketers called Closed Loop Marketing Solutions.[128] It

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[122] Kim Cleland, "New deals give rise to NetGravity," *Advertising Age*, June 17, 1996, 37.
[123] Jane Hodges, "DoubleClick Takes Standalone Route for Targeting Tools," Advertising Age, December 16, 1996
[124] Hodges, "DoubleClick Takes."
[125] O'Connor also likened the split to "throwing a turd in the punch bowl." Kevin O'Connor, "I am Kevin O'Connor, the co-founder and former CEO of DoubleClick, and now CEO of FindTheBest-AMA," *Reddit*, October 9 2012, http://www.reddit.com/r/IAmA/comments/117mtc/i_am_kevin_oconnor_the_cofounder_and_former_ceo/
[126] E.g. "DoubleClick Direct" experimented with cost-per-click pricing. O'Connor. *The Map of Innovation,* 192.
[127] Jennifer Gilbert, "DoubleClick Boosts Reach and Courts Media Buyers," *Advertising Age*, January 25, 1999.
[128] DoubleClick, *1998 Annual Report*, 6.

also created new internal divisions to focus on email marketing, promotions, sweepstakes, and sponsorships.

Likewise, CMGI placed the development of integrated and increasingly sophisticated online advertising services at the center of its "virtuous circle" investment strategy, which began to mirror DoubleClick's model of ad infrastructure provision. The company rolled many of its advertising concerns, including its AdSmart network, into its Engage Technologies subsidiary in order to expand the latter's service and technology offerings.[129] Rivaling DoubleClick in technological sophistication if not size, Engage provided ad services for CMGI-affiliated sites and, increasingly, outside clients.[130]

Through mergers and acquisitions and the strategy of infrastructure provision, DoubleClick and CMGI dramatically increased their web publisher and marketer client bases during the bubble period. As described in chapter one, DoubleClick launched its ad network in 1996 with approximately 30 participating web publishers.[131] At the end of 1998 DoubleClick delivered ads for or licensed its DART serving technology to over 570 publishers and by 2000 that figure was 1,600, including the *Wall Street Journal*, NBC, CBS, and eBay.[132] As to be expected, the number of marketers using DoubleClick's services increased as well, growing from 900 in the fourth quarter of 1997, to 2,300 in the fourth quarter of 1998, to 4,300 in the fourth quarter of 1999.[133] Marketers employing DoubleClick's services ranged from dotcom start-ups to major companies such as AT&T, Charles Schwab, IBM, Intel, and Microsoft.[134]

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[129] Among the companies subsumed by Engage were 2CAN, I/PRO, and FlyCast.
[130] Judge, "Internet Evangelist."
[131] *Gale Encyclopedia of E-commerce* (Detroit: Gale Group, Thomson Learning, 2002), s.v. "DoubleClick."
[132] DoubleClick, *1998 Annual Report*, 1-2; DoubleClick, *2000 Annual Report*, 6; Beth Snyder, "DoubleClick forms consumer-tracking unit," *Advertising Age,* October 5, 1998.
[133] "DoubleClick Revenues Rise, So Does Loss," *ClickZ*, April 24, 1998; DoubleClick, *1998 Annual Report*, 1-2; DoubleClick, *1999 Annual Report*, 7.
[134] "Double Click Short Term Buy," *Standard & Poor's Emerging & Special Situation*, January 15, 1998.

The total number of ad impressions served by DoubleClick grew exponentially as well.[135] In its first thirteen months the company delivered a billion and a half ads to more than 26 million unique users.[136] This was during the bubble's early stages and before DoubleClick received any risk financing. In 1998, the year of DoubleClick's IPO, the company served a total of 34 billion ads and reached 46 million web users worldwide in December alone.[137] While this initial upward trajectory is strong, it pales in comparison to the growth that occurred during the final two years of the bubble period, when DoubleClick's risk capital-fueled expansion enabled it to deliver a remarkable 621 billion advertisements in 2000.[138] In other words, it served about 200,000 more ads on the average day in 2000 than it delivered in its entire first year of existence, some four years earlier. Although not operating at the same massive scale, CMGI expanded its ad serving capacity as well. A significant portion of its growth came from within as CMGI invested heavily in various online publishers and retailers throughout 1998 and 1999, bringing new companies into the fold. By mid-1999 its AdSmart network comprised 300 websites and delivered over 2 billion monthly impressions.[139] A year later CMGI's ad properties combined served some 8.6 billion ads a month.[140] Building out this scale of delivery capacity was an essential component of these companies' transition from ad networks to infrastructure providers.

Impressions were important most obviously because they generated revenue directly; however, scale also factored into the ability to deliver ads to ever more precisely targeted audience segments. Without sufficient reach it was difficult to target highly specific types of consumers. As DoubleClick's O'Connor put it: "The great paradox with targeting ads is that the

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[135] As the largest ad infrastructure provider, DoubleClick regularly reported its impressions volume in its annual reports, while smaller competitors did not.
[136] DoubleClick, "Dynamically Targeted Advertising," [advertisement], *Adweek*, March 6, 1997.
[137] DoubleClick, *1998 Annual Report*, 1-2.
[138] DoubleClick, *2000 Annual Report*, 4. The number of unique users is unknown, as are totals for 1999.
[139] CMGI, *1999 Annual Report*, 3.
[140] Federal Trade Commission, *Online Profiling: A Report to Congress* (June 2000), 2.

more you are micro-targeting, the more reach you have to have."[141] Beyond this however was another impetus for expanding ad serving capacity: consumer profiling. As outlined in chapter one, DoubleClick's major technological breakthrough was to construct targeted ad serving and consumer profiling as reciprocal processes.[142] In this regard, increasing scale is about more than simply delivering as many ads as possible across as many sites as possible. It is also fundamentally about facilitating online data collection that can be leveraged to expand and improve consumer profiling systems and other database-driven marketing practices. DoubleClick's Kevin Ryan hinted at this as early as 1997, telling *Crain's New York Business*: "Critical mass is important. The bigger your [profile] database, the more targeted you can be."[143] As another DoubleClick executive put it: "This whole business is about scale."[144] But scale is not just about impressions. This understanding opens another dimension of the expansionary activities of our case study subjects and their implementation of Get Big Fast vis-à-vis the strategy of infrastructure provision. For DoubleClick and CMGI – the archetypal ad services providers – the tactic of pursuing mergers and acquisitions and developing networks of affiliated web companies was as much about profiling consumers as it was about delivering ads.

The reciprocity of ad serving and consumer profiling is essential to re-intermediation and to the broader model of infrastructure provision. Chapter one explained the significance of web communication protocols and web serving technology to this functionality. At the same time, implementations of technology are bound together by specific arrangements of social practices and organizational structures; "infrastructure is a relation and not a set of things."[145] Whereas

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[141] "Ads Find Strength in Numbers," *CNet News*, November 4 1996, http://news.cnet.com/Ads-find-strength-in-numbers/2009-1001_3-243757.html
[142] As facilitated through the Hypertext Transfer Protocol. See chapter one.
[143] Messina, "New Media's Hot Play."
[144] Beth Snyder, "DoubleClick revamps in growth spurt," *Advertising Age,* October 13, 1997.
[145] Sandvig, "The Internet as Infrastructure," 92.

chapter one examined technical features, the focus here is on the market relationships that enabled ad serving and consumer profiling to operate as reciprocal processes across great expanses of the web.

To get a picture of how this played out, let's revisit some of the mergers and acquisitions outlined above. CMGI's controlling investment in AltaVista "vaulted [it] into the number three spot among advertising networks" in terms of reach, but it also provided an abundant new source of consumer data.[146] The portal's ten million monthly visitors not only presented increased opportunities to serve ads, but also fed a steady stream of profile information into the databases of CMGI's Engage subsidiary. Likewise, DoubleClick's mergers with NetGravity and Abacus and its investment in ValueClick not only gave access to their existing profile databases, but also provided significant additional profiling capacity.[147] ValueClick's network alone gave DoubleClick entree to over 10,000 sites from which to collect consumer information.[148] As *Adweek* noted, "data" became an increasingly central factor in "dictating merger and acquisition strategy for the industry's leading players."[149]

At CMGI, extensive consumer profiling became the lynchpin of its infrastructure strategy. Our "vision is to have the largest reach on the web and monetize that reach better than anyone else," said a CMGI executive.[150] The goal was to "build interactive marketing services and infrastructure to generate revenue across that reach."[151] Portals like AltaVista and Lycos were positioned as hubs to funnel consumers amongst CMGI's roster of internet properties such as the financial information site Raging Bull, retailer Furniture.com, and genealogy site

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[146] Judge, "Internet Evangelist."
[147] "DoubleClick takes 30% stake in ValueClick," *Advertising Age's Business Marketing*, January/February 2000, 8.
[148] "ValueClick Online Advertising Network Tops 10,000 Members," *PR Newswire*, December 7, 1998.
[149] Vonder Haar, "Data chase."
[150] Jennifer Gilbert, "Weathering the i-storm," Advertising Age [Interactive Supplement], November 1, 1999.
[151] Gilbert, "Weathering the i-storm."

Ancestry.com.[152] Undergirding these connections were CMGI's advertising operations, Engage and AdSmart, which delivered ads for and collected consumer information from all CMGI-affiliated sites in addition to outside clients. As one journalist observed, "If CMGI has a core technology that weaves through its patchwork portfolio, it's the ability to track computer users through their every browser click."[153]

After the flurry of acquisitions and investments by CMGI in 1999 and 2000, Engage had stockpiled a profile database containing over 70 million entries, which it used to develop new ad targeting methods.[154] This emphasis on profiling and targeting was manifested in CMGI's balance sheets. In the third quarter of fiscal 2000, the proportion of CMGI revenues derived from online advertising reached an all-time high of 48%.[155] Yet even this dramatic growth could not match DoubleClick, which through its much larger network and own spate of acquisitions, had amassed a collection of 120 million user profiles, twelve times what it had at the start of 1997.[156] Web publishers began to collect their own consumer information during this period as well, but in many cases had to contract technology from an outside firm in order to do so.[157] And while infra providers had access to ad networks that monitored individuals across a multitude of sites, even the largest publishers were limited to their immediate affiliates. As a result, publisher's home-grown databases were far inferior to those of dedicated infrastructure providers.[158]

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[152] Judge, "Internet Evangelist."
[153] Norm Alster, "CMGI: Cashing in on Internet jackpot," *Upside*, 11, no. 6 (June 1999), 118.
[154] These targeting methods are addressed in detail in chapter four. Alster, "Can CMGI Stop the Bleeding?."
[155] CMGI, *2001 Annual Report*, 2.
[156] *Gale Encyclopedia of E-commerce* (Detroit: Gale Group, Thomson Learning, 2002), s.v. "DoubleClick."; DoubleClick, *2000 Annual Report*, 8.
[157] Steven Vonder Haar, "NetGravity Gathers Audience Data," *Inter@ctive Week*, October 19, 1998.
[158] For example, the *New York Times* implemented a targeted ad system based on profile information it had collected from its 1.7 million registered users, while publisher Ziff-Davis drew on a database of 2.5 million users from its subsidiary company, ZD Market Intelligence. Ann Marie Kerwin, "NY Times website lets advertisers get personal," *Advertising Age*, July 14, 1997; Bradley Johnson, "ZDNet hones targeting to link marketers, prospects," *Advertising Age*, May 31, 1999.

Although DoubleClick and CMGI were market leaders by significant margins, they were not the only ones in the field. A number of other companies began to attract risk capital in order to expand their service offerings in pursuit of a comprehensive infrastructure model.[159] Notable among these were ValueClick, AdForce, 24/7 Media, MatchLogic, and Real Media. The first two were incorporated into DoubleClick and CMGI to varying degrees.[160] The latter three remained independent, achieving significant stature through their own series of mergers.[161]

These challengers were spurred on by DoubleClick and CMGI's successes in the financial markets, which attracted risk capital investment to the broader online advertising sector and to the emerging market for ad infrastructure provision in particular. As the perpetual market leader, DoubleClick functioned as a kind of proof of concept for investors. By securing its initial investment from top-tier venture capital firms Greylock Partners and Bain Capital, DoubleClick earned a seal of approval from the finance capital community. This legitimacy brought five additional VCs to the table for DoubleClick's first round of financing and ignited a broader interest in online advertising among risk investors.[162] More broadly, DoubleClick was a founding company and the literal poster child of New York's Silicon Alley district, the formation of which

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[159] Kim M. Bayne, "Adknowledge rolls out web evaluation tool," *Advertising Age*, June 8, 1998; "Bulletin Board," *Advertising Age*, January 19, 1998, 37; Jennifer Gilbert, "Flycast medianet tracks online ads," *Advertising Age,* June 14, 1999.

[160] DoubleClick took a 30% stake in ValueClick, while FlyCast and AdForce were purchased outright by CMGI.

[161] In 1998, 24/7 Media was created via the combination of three online ad sales representation firms (Petry Interactive, Katz Millennium Marketing, and Interactive Imaginations), instantly making it the second largest ad network behind DoubleClick. MatchLogic achieved a significant boost when it was acquired by Excite, the number two internet portal behind Yahoo. The merger paired MatchLogic's targeting and profiling capabilities with Excite's sizable base of users and advertisers. Finally, a failed attempt by various newspaper publishers to create a unified ad network gave rise to Real Media, a provider of ad serving technology and ad sales representation. Building on relationships with high profile clients such as the *New York Times* and *Washington Post*, Real Media became a major ad distributer among newspaper publishers before expanding to the broader web. In 2001, 24/7 Media and Real Media merged to become 24/7 Real Media. In 2007, the company was purchased by global advertising conglomerate WPP. Matthew Goldstein, "Web agency uses its new bulk to make on-line strategy click," *Crain's New York Business*, April 13, 1998; "Big Flower Invests in Internet Advertising Network," *Business Wire*, April 7, 1998; "Excite agrees to buy MatchLogic for $120 million," *New York Times*, January 16, 1998; Kate Maddox, "Dave Morgan: Real Media," *Advertising Age*, June 1, 1998.

[162] O'Connor. *The Map of Innovation*, 145.

helped unleash east coast venture capital upon the nascent internet sector, previously financed almost exclusively by Silicon Valley firms.[163]

Clearly, investment begat investment on the broader stock market as well and, as one of the New Economy's most exalted firms, CMGI's focus on the advertising sector greatly boosted the latter's legitimacy. "The financial types and techies may hog the glory for the rise of the net, but thanks in part to CMGI, marketing is winning the day," noted one journalist.[164] In this environment, infrastructure providers raised more risk capital than other groups within the online advertising sector. As shown in table three, between 1998 and 2000 at least 11 infra providers held IPOs, raising a combined total of over $685 million. This is greater than the combined IPO values of the five "interactive" ad agencies ($480 million), two third-party audience measurement companies ($119 million), and one affiliate marketer ($67 million) that went public during the same period (table four).[165]

Table 3 Infrastructure Provider IPOs (1998-2000)

Company (Date)	Capital Raised ($ millions)
DoubleClick (Feb. 1998)	62.5
NetGravity (June 1998)	27
24/7 Media (Aug. 1998)	45.5
Flycast (May 1999)	75
AdForce (May 1999)	67.5
@Plan (May 1999)	35
Engage (July 1999)	90
Yesmail (Sept. 1999)	37.4
MediaPlex (Nov. 1999)	72
L90 (Jan. 2000)	97.5
ValueClick (March 2000)	76
Total:	685.4

[163] Indergaard, *Silicon Alley*, 78; Gina Neff, *Venture Labor: Work and the Burden of Risk in Innovative Industries* (Cambridge: MIT Press, 2012), 53; Between 1997 and 2002, the company commissioned a billboard near the historic Flatiron Building that read: "DoubleClick welcomes you to Silicon Alley."
[164] Callaghan, "CGMI's Excellence."
[165] These data do not include venture financing and follow-on offerings.

Table 4 Other Online Advertising IPOs (1998-2000)

Company (Date)	Capital Raised ($ millions)
Online Advertising Agencies	
Modem Media (Feb. 1999)	41.6
Razorfish (April 1999)	49
Agency.com (Dec. 1999)	153.4
Organic (Feb. 2000)	110
Avenue A (Dec. 2000)	126
Third-Party Audience Measurement Firms	
Media Metrix (May 1999)	51
NetRatings (Dec. 1999)	68
Affiliate Marketing Firms	
Be Free (Nov. 1999)	67.2
Combined Total:	666.2

The introduction of "second tier" players in conjunction with DoubleClick and CMGI's continued expansion resulted in the solidification of a model for online advertising infrastructure provision and a concentration of power in the ad services market. This proved to be a boon for larger online advertising market. By one estimate, some 80% of the internet's available advertising inventory went unsold in 1997.[166] By 1999, the growing scale and accessibility of ad infrastructure services had drastically reduced the amount of vacant advertising space.

At the market periphery, so-called "mass networks" were created in order to facilitate the placement of ads on sites with smaller audiences that could not attract advertisers on their own, could not afford sales personnel, or were otherwise unable to join major networks such as DoubleClick. Whereas DoubleClick's primary network was selective, mass networks brought together as many sites as possible in order to maximize reach and bring "big brand advertising to websites too small to solicit their own."[167] The most successful of these was LinkExchange. By implementing a clever system that combined barter with paid ad placements, LinkExchange

[166] George Anders, "Wide Open Space: Internet Advertising, Just Like Its Medium, Is Pushing Boundaries," *Wall Street Journal*, November 30, 1998.
[167] Laura Rich, "Network formulas," *MediaWeek*, May 26, 1999, Jane Hodges, "Commonwealth Network Helps Target Web Banners," *Advertising Age*, June 30, 1996; Williamson, "Online ad managing heats up."

compiled a massive network of more than 400,000 websites before being acquired by Microsoft in late 1998.[168]

On the opposite end of the spectrum were ad networks designed to reach highly focused niche audiences. For example, two networks that promised to deliver such audiences, one representing "the largest gay and lesbian online community" and the other "Christian and church-related web publishers" were announced within days of each other in February 1998.[169] Not to be outdone, DoubleClick separated its growing stable of sites into multiple tiers to represent various demographic and interest-based markets, while preserving its "Select" network for premier web properties. Similarly, CMGI's AdSmart classified every page of each the 90 sites in its network according to a matrix of some 450 content categories in order to enable more precise segmenting.[170] DoubleClick also created a system for swapping remnant (unsold) ad inventory among publishers on a one-to-one exchange basis.[171] In the event that DoubleClick could not deliver a targeted ad – for example if no appropriate consumer profile could be located – it would simply serve a default banner representing itself or one of its affiliates.[172] In O'Connor's words, the goal of re-intermediation was to ensure there was "never an unused ad space."[173] Likewise, the CMGI property FlyCast developed a market niche by auctioning off remnant inventory at reduced prices across a network of 1,000 sites that included premier

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[168] "Microsoft Acquires LinkExchange to Greatly Expand Small-Business Services From MSN," *PR Newswire*, November 5, 1998.
[169] "Gay.com and Rivendell Marketing Launch Online Advertising Network to Reach Gay and Lesbian Consumers," *Business Wire*, February 23, 1998; "Grizzard Inks Deal to Rep Church-based Internet Advertising Network," *Business Wire,* 25 February 25, 1998.
[170] Joseph Turow, *The Daily You: How the New Advertising Industry Is Defining Your Identity and Your Worth.* (New Haven: Yale University Press, 2011), 60.
[171] Jennifer Owens, "DoubleClick debuts Web-ad exchange program," *Adweek*, August 14, 2000.
[172] O'Connor. *The Map of Innovation*, 206. This helps explain DoubleClick's enormous ad delivery totals.
[173] O'Connor. *The Map of Innovation*, 206.

publishers such as Yahoo.[174] Other companies in the remnant auction market included Adauction and Adbot.[175] As explained by Adauction's CEO:

> The online auction works for publishers because it complements existing sales programs without creating channel conflict. Unlike other outlets that essentially replace the publisher's direct sales of advertising, the auction is similar to the inventory yield and management system that airlines use to sell off empty seats to brokers, travel agents and other companies. Ad availability and media are as perishable as an airplane reservation. The auction format helps efficiently sell advertising late in the sales cycle or, to complete the metaphor, just before the plane takes off.[176]

Again, the most readily identifiable outcome of the crystallization of the infrastructure model was a vast expansion of ad serving capacity, even among "second tier" companies. By 1999 multiple firms including AdForce, ValueClick, and FlyCast had reached the milestone of serving over one billion ads per month, while 24/7 Media was delivering 3 billion and Real Media, 10 billion.[177] No data on aggregate impressions are available, but some observers put the figure well into the hundreds of billions per month by late 1999.[178] Such estimates appear to be credible considering that DoubleClick alone was delivering approximately 50 billion monthly impressions. Moreover, intermittent data reveals dramatic growth from 1999 to 2000, when the total number of banner ad impressions purchased by the top twenty dotcom and traditional

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[174] Gilbert, "Flycast medianet."
[175] "Bulletin Board," *Advertising Age*, February 9, 1998.
[176] David Wamsley, "Online ad auctions offer sites more than bargains," *Advertising Age*, March 29, 1999.
[177] Debra Aho Williamson, "Targeting distinguishes AdForce from the pack," *Advertising Age*, March 1, 1999; "24/7 Media, Inc. Reports Year-End and Fourth Quarter Revenues That Exceed Expectations," *Business Wire*, March 2, 1999; "ValueClick Serves More Than One Billion Impressions Per Month," *PR Newswire*, November 1, 1999; "High Availability and Scalable Capacity for Internet Servers Cited as Top Issues Driving the Integration of New Web Switching Technology," *PR Newswire*, July 12, 1999; Federal Trade Commission, *Online Profiling: A Report to Congress* (June 2000), 2; "Christopher D. Neimeth Leaving New York Times Company To Become President, CEO of Real Media," *PR Newswire*, December 8, 1999.
[178] Rothenberg, "An Advertising Power."

marketers increased some 416%.[179] In any case, the sheer volume of advertising on the web grew by an order of magnitude from 1998 to 1999 and again from 1999 to 2000, at which point three different companies – DoubleClick, CMGI's Engage, and 24/7 Media – wielded the capacity to reach over half of global internet users.[180]

It bears repeating that banner ad impressions are just one measure of infrastructure development. The strategy was an attempt to dominate online advertising by "re-intermediating" every possible advertising transaction, regardless of any specific ad format or technology. Responding to an interviewer's accusation that DoubleClick was simply "peddling banners," O'Connor articulated the agnosticism of the infrastructure model as such: "You're fixating on a single piece of real estate that happens to be shaped like a banner. Our business is, we take bytes. … whether they're shaped like a banner or a pop-up or a sponsorship… It could be a video, it doesn't matter. We take those bytes and we target them at consumers, and we watch how consumers react."[181]

DoubleClick and its rivals achieved a significant level of success not in perfecting internet advertising practices per se, but in facilitating the growth of the medium as an advertising channel and positioning themselves at the center of that market. Here especially, the frame of infrastructure adds an important element of understanding and sets this research apart from a primarily descriptive business history. Infrastructure studies highlights the technological and "infrastructural inertia" that can occur within complex systems whereby the "economics of path dependence" can ensure that established trajectories "tend to continue in particular

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[179] The top ten dotcom marketers and the top ten traditional marketers together purchased 21.7 billion (annualized) impressions in 1999 and 112 billion in 2000, over a 416% increase. However, this does not necessarily represent the top twenty marketers in terms of total impressions. "Net Results," *Advertising Age* [Interactive Supplement], November 1, 1999; "Net results," *Advertising Age*, February 26, 2001.
[180] Federal Trade Commission, *Online Profiling: A Report to Congress* (June 2000), 3.
[181] Schrage, "Kevin O'Connor."

directions, making reversals or wholesale leaps to alternative approaches costly, difficult, and in some cases impossible."[182] In this case, the technology appropriation and business investments made by DoubleClick and CMGI yielded an inertia that granted them significant market power and put them in a position to shape the particulars of online advertising's construction. As this chapter has illustrated, these investments were heavily dependent upon the dotcom financial bubble, which presented its own set of consequential logics such as the Get Big Fast model of growth and the centrality of marketing practices within modes of financial assessment.

By directing risk capital to fund mergers and acquisitions, labor force expansions, and technology development, DoubleClick and CMGI increased their capacity to serve ads and profile consumers, broadened their service offerings, and came to "re-intermediate" a broadening range of advertising-related transactions. Their model of infrastructure provision became an archetype among the largest ad services companies, which lowered the barriers to entry for marketers that had previously exhibited reluctance to spend money on web advertising. Contrary to popular mythologies of the period regarding the internet's capacity to engender "friction free" competitive markets, the online advertising sector rapidly consolidated via the ascension of a small of group of infrastructure firms that provided a sweeping array of services. Strategies such as Get Big Fast and re-intermediation were about eliminating competition as quickly as possible and the dominant players indeed took home the lion's share of revenues. In mid 1999, *Advertising Age* characterized DoubleClick as "the closest thing to a de facto standard as anything in the market."[183] By 2000, half of the Fortune 100 companies were DoubleClick clients.[184]

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[182] Jackson, et al., "Understanding Infrastructure." Quoted in Sandvig, "The Internet as Infrastructure," 98.
[183] Dana Blankenhorn, "DoubleClick sharpens customer focus," *Advertising Age*, March 1, 1999.
[184] DoubleClick, *2000 Annual Report*, 6.

Responding to marketer demands, DoubleClick and CMGI constructed a particular form of online advertising that centered on consumer surveillance. This chapter has primarily addressed consumer surveillance at the level of charting the capacity of companies like DoubleClick to profile internet users. The next chapter provides an extended analysis of the specific practices of consumer surveillance that were constructed during this period. For now it is sufficient to note that in the hands of infrastructure providers, consumer surveillance became an industry standard that has displayed powerful "infrastructural inertia."[185]

Conclusion: Taking "stock" of the dotcom investment bubble

This chapter concludes by tying together themes from the first three chapters in order to reinterpret the dotcom bubble's status within the history online advertising's construction. Scholarship addressing internet advertising has generally underestimated or ignored entirely the interlocking roles of risk capital investment, dotcom companies, and ad infrastructure providers.[186] One tendency has been to gloss over the 1990s as a prosaic era of banners and pop-ups, a false start in the development of online advertising that was swept away in the financial collapse of the dotcom bubble. The real action begins in the early 2000s, essentially with Google's refinement of keyword advertising and implementation of the auction-based pay-per-click model, so the story goes.

The counter-argument presented here is that the banner era is better conceived of as the surveillance infrastructure era, which has had a profound impact not only on the development of the internet, but also the marketing complex at large. While the dotcom crash was highly

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[185] Sandvig, "The Internet as Infrastructure," 99.

[186] Clearly this criticism does not diminish the value of this work in other respects. Turow, *The Daily You;* Joseph Turow, *Niche Envy: Marketing Discrimination in the Digital Age* (Cambridge: MIT Press, 2006); Andrew McStay, *Digital Advertising* (New York: Palgrave Macmillan, 2009); Jeff Chester, *Digital Destiny: New Media and the Future of Democracy* (New York: New Press, 2007); Christina Spurgeon, *Advertising and New Media* (New York: Routledge, 2007).

destructive in financial terms, it was not some kind of extinction event for online advertising. The "collapse of the online advertising market" in the wake of the bust has been overstated even among its most incisive critics.[187] Aggregate spending totals are the most readily apparent source of evidence for an alleged collapse. According to the Interactive Advertising Bureau, total online ad spending declined by approximately 12% from 2000 to 2001 and 16% from 2001 to 2002, before resuming growth in 2003.[188] *Advertising Age* data shows an increase of 8% followed by a decrease of 14% for respective periods.[189] For perspective, aggregate ad spending across all media dropped about 6.5% from 2000 to 2001 and increased 2.4% from 2001 to 2002.[190]

This evidence is somewhat mixed, but it is reasonable to surmise that online ad spending did indeed decline in the aftermath of the crash. Yet this does not presuppose a failure of the online advertising market. Certain trends related to the bust dragged overall spending downward. Many dotcom companies – a major source of demand – perished in the crash.[191] Those that survived still spent significant amounts of their marketing budgets online, but these budgets were smaller in an absolute sense, constricted by the sudden vacancy of risk capital and the decimation of puffed up market capitalizations.[192] This abrupt drop in demand – DoubleClick reportedly lost 70% of its clients – as well as the erasure of the aura of confidence that once surrounded the New Economy caused ad rates, previously buoyed by dotcom hype, to fall precipitously.[193]

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[187] Turow, *Niche Envy,* 40.
[188] Interactive Advertising Bureau, *2003 IAB Internet Advertising Revenue Report* (April 2004), 7.
[189] Advertising Age DataCenter, "Domestic Advertising Spending Totals," *100 Leading National Advertisers: 2002 edition*, June 24, 2002, http://adage.com/article/datacenter-advertising-spending/100-leading-national-advertisers-index-2002-edition/106669/; Advertising Age DataCenter, "Domestic Advertising Spending Totals," *100 Leading National Advertisers: 2003 edition*, June 23, 2003, http://adage.com/article/datacenter-advertising-spending/index-100-leading-national-advertisers-2003-edition/106760/
[190] United States Census Bureau, "Advertising–Estimated Expenditures by Medium [Table 1243]," *The 2010 Statistical Abstract,* http://www.census.gov/compendia/statab/2010/tables/10s1243.xls
[191] See chapter two.
[192] Kevin Featherly, "Traditional Firms Flock To Online Advertising," *Newsbytes*, November 20, 2000.
[193] Regarding prices falling: Normandy Madden, "Economy hampering Yahoo's global goals," *Advertising Age*, March 12, 2001; Josh Zelman, "Gilt's Kevin Ryan–It Is All In The Presentation, [Founder Stories]" *Tech Crunch*,

Other factors mitigated the ad market's decline. Taking advantage of lowered prices and improved services, many marketers began to include the web in their media mixes for the first time, while those that had already been online began to spend more.[194] As one journalist described, the financial collapse "that saw dotcom stock prices plummet and is still shaking out in the form of dotcom bankruptcies and failures, has not slowed online advertising."[195] Pointing toward continued growth, nearly 5,500 companies tried internet advertising for the first time in the third quarter of 2000 compared to about 3,900 companies in the second quarter.[196] Likewise, *CNET News* reported that the aggregate number of marketers purchasing online advertising quadrupled in 2000 from 1999 levels.[197] As a Forrester Research analyst put it: "The dotcoms were the hare. Traditional companies have been the tortoise … plodding along" but on track to become "the backbone of internet spending."[198] This trend was reflected at DoubleClick, where the proportion of revenues from traditional advertisers grew to over 70% in the fourth quarter of 2001 compared to 44% in the fourth quarter of 2000.[199]

The result is that although aggregate online ad spending decreased, it is highly likely that volume did not. No comprehensive data is available, but the influx of new marketers coupled with the enormous delivery capacity of the leading ad infrastructure providers likely served to maintain or even increase the scale of online advertising compared to pre-crash levels.[200] For instance, DoubleClick delivered more ads annually in 2001 and 2002 than it did in the years

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May 28, 2011, [quote is from video interview], http://techcrunch.com/2011/05/28/founder-stories-kevin-ryan-presentation/

[194] Jennifer Gilbert, "Dot-coms apply more scrutiny to online buys," *Advertising Age*, August 7, 2000.

[195] Featherly, "Traditional Firms Flock."

[196] Featherly, "Traditional Firms Flock."

[197] Stefanie Olsen, "Advertisers flock to the Web," *CNET*, December 3, 2000, http://news.cnet.com/Advertisers-flock-to-the-Web/2100-1017_3-249311.html?tag=mncol;30n

[198] Patricia Riedman, "Net Loss; Flat online ad spending forces i-shops to pare down," *Advertising Age*, September 18, 2000.

[199] DoubleClick, *2001 Annual Report*, 6.

[200] And this does not account for the dramatic increase in the sophistication of ad targeting and consumer profiling discussed in the next chapter.

leading up the crash, while the much smaller 24/7 Media reported a decline.[201] Moreover, the market's downturn did not halt the steadily increasing population of internet users.[202]

In many respects the bust served to reinforce the infrastructure model that DoubleClick and its rivals were developing. Dotcoms with stunted marketing budgets placed a renewed emphasis on targeting and accountability.[203] Those that previously spent lavishly on brand-building campaigns in television, radio, billboards, and print turned back to the internet, where lowered CPMs and cost-per-action models helped to stretch ad dollars. Said one industry analyst in late 2000, "You're going to see online advertising is extremely targeted this year because every cent has to count."[204] As Rich LeFurgy, chairman of the Internet Advertising Bureau told *Advertising Age*: "A lot of the budgets that were going into traditional media and not into online, ironically, are now being deployed in online advertising. … In a sense, it's online advertising's renaissance."[205]

The revitalized focus on targeting and accountability among dotcoms as well as the larger influx of traditional marketers were facilitated by the development of the very online advertising infrastructure services described herein. The relatively moderate fall in aggregate spending precipitated by the crash caused only a limited disruption of online advertising's expansion precisely because underlying infrastructural capacities had already been established with the essential support of financial markets. Contrary to claims that the dotcom crash killed online advertising, the ironic truth is that risk capital was its most important benefactor and, in a way, its saving grace. This understanding allowed a sanguine *Advertising Age* to editorialize:

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[201] DoubleClick, *2001 Annual Report*, ii; DoubleClick, *2002 Annual Report*, iv; DoubleClick, *2000 Annual Report*, 4; 24/7 Media, *2000 Annual Report*, 23; 24/7 Media, *2001 Annual Report*, 6. Data after 2001 are not comparable after 24/7's acquisition of Real Media.
[202] Zelman, "Gilt's Kevin Ryan."
[203] Stephanie Olsen, "Dot-coms paring down ad spending ahead of holidays," *CNET*, November 1, 2000; Gilbert, "Dot-coms apply more scrutiny."
[204] Olsen, "Dot-coms paring down."
[205] Gilbert, "Dot-coms apply more scrutiny."

> The dot-com debacle is in full force, but the future of the internet – of e-marketing, of e-commerce – has never been better. The marketing community, far from mourning the loss of easy billings or writing off the field, should focus instead on the opportunity that lies ahead and the stronger surviving players that will lead the way. … The dot-com shakeout came as no surprise. But too much focus on its financial and marketing disasters misses the important point that the business-to-consumer internet market is wide open, with growth and profits ahead. There's never been a better time to be optimistic about opportunities in the consumer internet space. It's a good time to be a contrarian.[206]

While the collapse of the New Economy momentarily stalled online ad spending (and ad spending in general), the larger consideration is that in the short period of the bubble, a core group of companies were empowered to provide a robust infrastructure for online advertising that included a massive capacity to deliver targeted advertising and profile consumers. This "surveillance infrastructure" is the real legacy of the dotcom era and is examined in detail in the next chapter. Responding to marketer demands, infrastructure providers placed consumer surveillance at heart of the web's technical composition and everyday practice, and laid the groundwork for the reshaping of the political economy of the marketing complex carried on today by contemporary market leaders such as Google and Microsoft.

[206] "Brighter days for net plays," *Advertising Age*, August 7, 2000, 36.

Chapter 4

Surveillance Infrastructure and Marketing Convergence

Chapter three described how online advertising market leaders began to reconfigure the ad network business strategy into a model of infrastructure provision via the engine of the dotcom investment bubble. This chapter examines how a widespread regime of consumer surveillance came to occupy the center of this development and addresses some of the social challenges that have emerged as a result. Throughout 1998 and 1999 major marketers increasingly began to adopt the internet as an advertising channel and sought to use their influence to control the medium to the greatest extent possible. Facing pressure from marketers to justify expenditures, online advertising infrastructure providers such as DoubleClick and CMGI initiated advances in behavioral profiling and expanded forms of data exchange among their publisher and marketer clients in order to increase the "relevance" of targeted ads.

These practices hinged upon increasingly invasive and often surreptitious practices of data collection, whereby information was gathered about internet users for the express purpose of cataloguing them for differential engagement. Although these systems often remained ungainly, the developing *surveillance infrastructure* facilitated a growing convergence among the actors and practices within the marketing complex. Linking up with historical trends in the marketing sector, *marketing convergence* became a hallmark of online advertising's construction and remains a pivot around which contemporary marketing practices are being reformulated. This chapter situates this history within larger processes of accelerating commodification around information and communication technologies and concludes by exploring the ways in which surveillance-based advertising reproduces social discrimination and inequality in online contexts.

Discrimination of this kind is facilitated by processes of "digital enclosure" whereby submission to surveillance increasingly becomes a condition of internet access.

The Marketer Imperative: Return-on-investment

As the infrastructure business model took shape, ambivalence regarding the web as an ad medium and unease about standards of audience measurement remained inhibiting factors for some marketers. For those that were already committing portions of their advertising budgets online, these general anxieties had crystallized into a fixation upon "return-on-investment" (ROI). As the trade press debated whether the internet was inherently a direct response medium or better suited for brand building, marketers on the whole demanded increased measurement of consumer responses for every ad campaign, regardless of its particulars. Even as more marketers moved online, a 1999 poll by Forrester Research found that only 16% were "satisfied with online ad measurement capabilities," while 68% of member companies surveyed by the Association of National Advertisers reported that insufficient ROI metrics were a "key barrier to online advertising."[1]

Marketers continued to lament the oversaturation of banner ads and dwindling click-through rates, which fell from an average of 2 percent in 1997 to half a percent or lower by 1999.[2] As summarized by the *New York Times*: "Like the magazine scent strip and the television infomercial, the banner has sparked revulsion – from advertisers as well as from consumers. Web users have long protested about screens crowded with ugly come-ons that … grow more intrusive each day. Advertisers complain about low and declining click-through rates, an

[1] Judith Mottl, "The trouble with Online ads," *InformationWeek*, October 11, 1999.
[2] Randall Rothenberg, "An Advertising Power, but Just What Does DoubleClick Do?," *New York Times*, September 22, 1999; Dylan Tweney, "Online advertising: a $3 billion industry limping on its last legs," *InfoWorld*, October 4, 1999.

indication to many that their brand messages aren't getting through."[3] Although the average cost of web advertising had fallen since its early period of novelty, it was often still "more expensive per impression than any other medium."[4] In any case, rates were steep enough that traditional marketers pushed relentlessly for increasingly quantifiable metrics to assess return-on-investment.[5]

In August 1998 Procter & Gamble organized a multi-industry gathering of marketers and advertising agencies – including its archrival Unilever and other competitors – branded as the Future of Advertising Stakeholders Summit (FAST).[6] The assembly's purpose was to catalyze the marketing complex and the online advertising sector in particular to address perceived deficiencies of the internet as an ad medium. Chief among their concerns were improving ROI by establishing measurement standards and streamlining media buying processes. Task forces were convened to confront these issues. Recapitulating the goals articulated by P&G CEO Edwin Artzt in 1994, these specific campaigns fell under the broader mission of creating "an environment where advertising revenue is the key funding source for the large majority of information and entertainment sources in the evolving world of media."[7]

"Holding a $3 billion carrot over the hungry heads of the online media world," P&G's vice-president of advertising, Denis Beausejour, was strategic in his framing of these issues.[8] "In the short term, it's unlikely that interactive media will make or break the marketing plans for

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[3] Rothenberg, "An Advertising Power."
[4] Jim Kerstetter, "Drill-Down on Web Ads," *PC Week*, November 9, 1998.
[5] George Anders, "Wide Open Space: Internet Advertising, Just Like Its Medium, Is Pushing Boundaries," *Wall Street Journal*, November 30, 1998.
[6] The summit established a new industry association, the FAST Forward steering committee, as a joint effort of the major trade groups within the marketing complex, the Internet Advertising Bureau, Association of National Advertisers, American Association of Advertising Agencies, and Advertising Research Foundation. "New Ad Group Formed at P&G's FAST Summit," *ClickZ*, August 21, 1998, http://www.clickz.com/clickz/news/1694663/new-ad-group-formed-p-gs-fast-summit
[7] "New-Media Summit Called," *Advertising Age*, September 26, 1994.
[8] Sally Beatty, "P&G, Rivals and Agencies Begin Attempt to Set On-Line Standards," *Wall Street Journal*, August 24, 1998.

very many traditional package goods brands," he said. "However, if you extend the timeline just a few years, we see the potential for a digital media disruption that will rapidly reshape not only our advertising and marketing efforts, but perhaps our entire business model."[9] It was clear that traditional marketers (with advertising agencies in tow) were beginning to awaken to the internet medium and that they would intervene to mold its development to suit their interests. Despite the short-term safety net provided by dotcom bubble risk capital, the young online advertising industry understood that it ultimately needed to make itself indispensible to major marketers in order to prosper in the long run. One estimate put the combined ad-buying power of the FAST alliance at more than $50 billion a year.[10] In 1998, total internet ad spending was a fraction of that, approximately $1.9 billion.[11]

Online advertising infrastructure providers (*infra providers*) in particular recognized the stakes. As one executive reportedly told a group of marketers at the summit: "Just tell us what you want us to do, and we'll do it."[12] Web publishers too had little choice but to get on board with efforts to improve ROI. Martin Nisenholtz, president of *New York Times* online division, articulated this realization from the publisher perspective: "We are struggling every day to sell advertising in an environment where advertisers, quite frankly, still don't know quite what this does for them. … The internet is only going to work as an advertising forum if the advertisers see it as a more efficient vehicle than mass marketing."[13]

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[9] Jack Neff, "Denis Beausejour: Procter & Gamble," *Advertising Age*, June 1, 1998.
[10] Beatty, "P&G, Rivals and Agencies Begin Attempt."
[11] Interactive Advertising Bureau, *2000 IAB Internet Advertising Revenue Report* (April 2001), 6.
[12] Beatty, "P&G, Rivals and Agencies Begin Attempt."
[13] Federal Trade Commission, *Public Workshop on Consumer Information Privacy, Session Two: Consumer Online Privacy*, Testimony of Martin Nisenholtz, June 11, 1997, 224, 227.

The Stages of Surveillance: Infrastructure, Behavioral Profiling, and Data Exchange

Continuing a trajectory that began as early as 1996, some within the industry tried to ameliorate marketer concerns by augmenting banner ads with what became known as "rich media" capabilities such as animation, video, and advanced interactivity.[14] Web publishers also entertained increasingly intrusive ad placements such as full-screen ads and interstitials, which loaded in browsers before users could reach their expected destinations. Yet another trend was the incremental blurring of the distinction between editorial and advertising messages. In efforts to go beyond the banner, publishers began to experiment with new forms of "advertorial" content that fell beyond the accepted norms of offline media.[15] "If the money is right, many online publishers are willing to strike whatever sort of partnerships an advertiser might want," reported the *Wall Street Journal*.[16]

Yet flashier banners and advertorial content did not address the core problem of "relevance." The industry wagered that dismal click-through rates owed to insufficiently targeted ads. On the web, interactions such as clicks were understood as real-time registers of intent or interest. Unless marketers could reach consumers with the "right message at the right time," they would simply be ignored.[17] Ads had to be made more relevant and relevancy required increased knowledge about consumers. Ever greater personalization of advertising was positioned as the solution for reigning in the chaos of the web medium that seemed to give consumers more

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[14] A few examples among many. "Study: Rich Media Boosts Performance of Ads," *Advertising Age*, March 22, 1999; "Flycast Introduces Rich Media Program to Enhance Web Advertising ROI," *PR Newswire*, September 21, 1998; "Leading Online Ad Networks and Ad Management Solutions Flycast, DoubleClick, Adsmart And NetGravity to Offer Unicast's Superstitial Rich Media Advertising Format to Advertisers and Sites," *PR Newswire*, October 18 1999;

[15] Anders, "Wide Open Space."; Although, this has been a growing issue in traditional media as well. Robert W. McChesney, *Rich Media, Poor Democracy: Communication Politics in Dubious Times* (New York: New Press, 2000).

[16] Anders, "Wide Open Space."

[17] Kevin O'Connor. *The Map of Innovation: Creating Something out of Nothing* (New York: Crown Business, 2003).

control over their experiences. While the web's unruliness contributed to an increasing scarcity of consumer attention to commercial messages, marketers and infra providers also saw potential in utilizing internet technology to learn about consumers in order to better tailor marketing interactions.

The notion of personalized ads represented "a new twist on a late twentieth-century understanding of customer relationship management (CRM)."[18] In the early 1990s, marketing gurus such as Don Peppers and Martha Rogers promoted the concept of "one-to-one" or "relationship" marketing as a method of maintaining engagement with a company's most important customers and prospects.[19] A mantra of CRM was that a majority of profits stem from the repeat business of a select group of loyal customers. As such, marketers needed to cultivate relationships with this group and seek out others who would "act like best customers once they are brought into the fold."[20] The goal was to engage such targets in conversation – to speak to consumers, but also to watch and listen. This is the context in which the advertising infrastructure arms race between DoubleClick and CMGI described in the previous chapter took a sharp turn towards the development of more sophisticated and expansive mechanisms of consumer surveillance, defined here as the systematic collection, analysis, and exchange of consumer data for advertising purposes.

Increasing "relevance" became a new organizing principle for the online ad industry and infra providers in particular. Building on their ad network foundations, DoubleClick and CMGI created increasingly refined and far-reaching systems of user profiling and ad targeting. The goal was to enable marketers to reach receptive consumers as efficiently as possible and to provide

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[18] Joseph Turow, *The Daily You: How the New Advertising Industry Is Defining Your Identity and Your Worth* (New Haven: Yale University Press, 2011), 90.
[19] Don Peppers and Martha Rogers, *The One to One Future: Building Relationships One Customer at a Time* (New York: Doubleday, 1993). Peppers actually served on DoubleClick's board of directors.
[20] Turow, *The Daily You,* 90.

easily identifiable measures of return-on-investment.[21] As CMGI CEO David Wetherell told *BusinessWeek*, his "single most important revelation" was coming to understand consumer surveillance as the central business proposition of online advertising.[22] The upshot was that infrastructure providers sought to position themselves as invaluable intermediaries within this market and to entice more traditional advertisers to hire their services. In these efforts, selling the promise of exactitude was key.

Beginning roughly in 1998, surveillance-based ad targeting emerged as the online ad industry's "biggest driver of change."[23] While early forms of consumer profiling had been under construction by ad networks and others since 1996, this period marked a significant new stage of development. The initial period, outlined in chapter one, was premised on the appropriation of HTML cookie technology into ad serving processes in order to enable what might be called *local surveillance*. In this sense local means occurring within a restricted area such as a given website or network of sites. It does not necessarily mean limited in size; DoubleClick and other ad networks were quite large even in 1997, but they engaged in local surveillance in the sense that their profiling and targeting activities were more-or-less bounded by affiliations with a single business entity.

This second stage involved extending the capacity for surveillance across many unaffiliated websites and beyond the web itself in order to improve ad targeting processes. These practices have sometimes been grouped under headings such as "dataveillance" or "database marketing."[24] I use the term *surveillance infrastructure* to make explicit the connection to the trend of infrastructure provision discussed in chapter three, which emphasized a broadening of

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[21] Michael Schrage, "Kevin O'Connor," *Adweek*, January 18, 1999.
[22] Paul C. Judge, "Internet Evangelist," *BusinessWeek*, October 25, 1999, 140-148.
[23] Steven Vonder Haar, "Data chase," *Adweek*, September 6, 1999.
[24] For a discussion of the history of the term dataveillance see Greg Elmer, *Profiling Machines: Mapping the Personal Information Economy* (Cambridge: MIT Press, 2004), 36.

services ("re-intermediation") throughout the online advertising market and precipitated sustained investment in hardware, software, and labor to support surveillance on a massive scale. I do not mean to suggest the creation of some Orwellian apparatus of "total information awareness."[25] The development and implementation of new surveillance practices and technologies was and remains accretive, disjointed, and often criticized for its clumsiness. However, despite real and perceived shortcomings, consumer surveillance rapidly became the leading edge of online advertising's growth and remains so today. As will be demonstrated, these efforts have been far from perfect, but they were good enough and are getting better.

Surveillance infrastructure depended on extending both the technological capabilities and market relationships that facilitated the collection and exchange of consumer information. Data collection and ad targeting were improved and expanded through advances in behavioral and externally sourced profiling. These processes were enhanced and extended further via a surge in the exchange of consumer information among ad service providers, web publishers, and marketers themselves.

Improving ad relevance required a level of immediacy that demographic or IP address data could not provide. Behavioral profiling was an attempt to gather and analyze information that could help marketers determine the intentions of consumers in real-time in order to serve them more relevant ads. DoubleClick and others used HTML cookies to develop basic *local* behavioral profiling applications as early as 1996.[26] Some early techniques were simple clickstream analysis (tracking users as they went from site to site *within* a given ad network) and

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[25] Although the Department of Defense under George W. Bush introduced such a program in 2002. Funding for that particular effort was eventually retracted by Congress, but Barack Obama's administration has made renewed efforts towards total information awareness through the National Security Administration. Jeffery Rosen, "Total information awareness," *New York Times Magazine*, December 15, 2002; James Bamford, "The NSA is building the country's biggest spy center," *Wired*, March, 15, 2012.

[26] See chapter one for discussion of the use of HTML cookies in ad targeting and consumer profiling.

ad frequency monitoring (tracking the number of ad exposures for a given consumer). Pressure from marketers produced a constant drive to measure and synthesize a broader range of data inputs. For example, in addition to cataloging the addresses and time stamps of the sites visited by a user in a given ad network, clickstream analysis was revised to collect data pertaining to frequency and duration of visits over time.[27] This helped construct more detailed profiles related to consumer interests and browsing habits.

Along these lines, infrastructure providers developed novel data collection methods such as monitoring the ads that users hovered over with their computer mouse, but did not click. How long did they linger? What was clicked immediately after hovering on a given ad? Did the user visit the sponsoring site at a later time via an email link or a search engine? These types of behavioral data were input into algorithms designed to deduce consumer attributes from an expanding array of sources, among which observed behaviors became the most important. The result was the construction of increasingly finely grained consumer profiles that were continuously updated to reflect new information. These "black box" processes were considered trade secrets, so limited information exists regarding their operational details.[28] However, it is illustrative that CMGI's Engage reportedly categorized "user affinities" based upon a matrix of some 800 sub-characteristics.[29] The product description for Engage's "Next Generation Profiling" service provides further insight:

> Next Generation Profiling techniques used by Engage.Knowledge are based on observed behavior of anonymous visitors across multiple websites. As a visitor browses through an Engage-enabled website, the Engage Suite software builds individual profiles based on

[27] Engage, "Engage.Discover(TM)," archive captured February 13, 1998, http://web.archive.org/web/19980213153254/http://www.engagetech.com/text/discover.htm
[28] O'Connor, *The Map of Innovation*, 203.
[29] Kipp Cheng, "Engage technology plays follow the user," *Adweek*, October 11, 1999.

> the type of content viewed, the time spent viewing, and other factors including their frequency and recency of visits to a particular interest category. This information is processed by a patent-pending algorithm into profiles that include a user identification number, an interest category code, and an interest score to indicate a level of interest in a particular category. A single visitor can have several entries in the database – one for each observed interest category. As the number of recorded visits of a single visitor grows, the accuracy and depth of the profile is improved. Unlike static registration information, Engage.Knowledge profiles are constantly changing to more accurately reflect the current interests of an individual.[30]

This type of behavioral profiling was extended through post-click analysis. The term is straightforward; in order to help marketers gauge ROI, post-click analysis aims to measure the actions taken by web users after they click on an ad and are transported to a destination site such as an online retailer or corporate home page. DoubleClick's Spotlight was one such service designed to "show a true relationship between advertising and sales" by continuing to collect behavioral data after the user had reached a marketer's site.[31] In this way DoubleClick could link transactions such as purchases or registrations to specific users (cookies) and banner campaigns. Similarly, the CMGI subsidiary AdKnowledge offered post-click analysis that calculated "conversion rates" based on factors such as downloads, purchases, or time spent on a marketer's site.[32] Seeking to prove their value, ad infrastructure providers went to great lengths to make post-click and other ROI data readily available and modifiable. Spotlight offered marketers "customizable metrics, such as the number of registrations, number of sales, number of units

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[30] Engage, "Engage.Knowledge(TM)," archive captured February 13, 1998, http://web.archive.org/web/19980213153314/http://www.engagetech.com/text/knowledge.htm
[31] DoubleClick, "Ad Info / Products," archived captured February 5, 1998 http://web.archive.org/web/19980205040958/http://www.doubleclick.net/nf/adinfo/spotlset.htm
[32] Dana Blankenhorn, "AdKnowledge goes beyond clicks to measurable results," *Advertising Age*, March 1, 1999.

purchased, type of service purchased, and actual sales revenue that has been generated as a result of a campaign."[33] Likewise, Engage allowed marketers to "manipulate [ad campaign] results, rerun the query to drill down into more detail, and even customize the bars on a graph or the slices in a pie chart."[34]

In order to implement post-click analysis, marketers had to give infrastructure providers high-level access to their own sites. For example, DoubleClick had to place a tracking code (via an invisible image called a web bug that worked in conjunction with cookies) on clients' sites in order to enable Spotlight's post-click analysis functionality. More in-depth forms of post-click analysis involved giving infrastructure providers access to the guts of primary web applications such as shopping, payment, and user registration systems. In this way, many versions of post-click analysis presupposed the exchange of data between infrastructure providers and their marketer clients. Before further considering this important trend, another component of surveillance infrastructure must be introduced: externally sourced profiling.

If advances in behavioral profiling provided a new level of immediacy to surveillance, externally sourced profiling provided a greatly expanded scope. Some forms of consumer data could simply not be obtained online, no matter the sophistication of surveillance technology. Moreover, individual infrastructure providers possessed differing levels of profiling capability and expertise. One way to gain competitive advantage was to augment existing profile databases by purchasing access to data that could not be produced in-house, including potentially sensitive data such as personally identifiable information (PII). This market opportunity was largely met by third party data providers that hailed from the already well-established offline consumer

[33] DoubleClick, "DART for Advertisers," archive captured August 15, 2000, http://web.archive.org/web/20000815213040/http://www.doubleclick.net:8080/advertisers/techsolutions/dfa.htm
[34] Engage, "Engage.Discover(TM)."

information services industry.[35] Like behavioral profiling, external data had been employed by ad networks and others since at least 1996. DoubleClick was among the first to augment its IP address databases with third-party data obtained from the US census and commercial sources. Indeed this was one of the distinctions that set the company apart from other early ad networks and helped it achieve immediate success.

Again, what changed in this second phase of surveillance was the extent to which third party data was utilized and the nature of the information itself. A major trend was the integration of increasingly sensitive forms of consumer information. AdKnowledge's MarketMatch media buying service integrated an array of such data, including "audience demographics from [online ratings services] MediaMetrix and NetRatings; psychographic data from SRI Consulting; website ratings and descriptions from NetGuide; and web traffic audit data from BPA Interactive."[36] Across the board, these external data sources offered infrastructure providers opportunities to improve the "relevance" of their ad targeting apparatuses. A trajectory developed whereby providers sought to integrate increasingly sensitive consumer information in order to better target ads and boost ROI. CMGI's AdForce secured an exclusive partnership with the global information services conglomerate Experian to provide aggregated data for ad targeting purposes.[37] Although the specific nature of their transactions remains unknown, it is reasonable to assume that the data was 1) difficult if not impossible to obtain via "normal methods" of online surveillance and 2) of a potentially sensitive nature. Some context is provided by the fact

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[35] The broad trend of third-party data integration warrants an extended analysis that is beyond the scope of this chapter, but that I hope to pursue down the line. These practices need to be situated within the history of the consumer data information sector and broader trends of what Schiller calls "informationalized capitalism." See Dan Schiller, *How to Think about Information* (Urbana: University of Illinois Press, 2007); Kevin Robins and Frank Webster, "Cybernetic Capitalism: Information, Technology, Everyday Life," in *The Political Economy of Information*, eds. Vincent Mosco and Janet Wasko (Madison: The University of Wisconsin Press, 1988), 45-75. For a useful analysis that does not take this explicit approach, see Turow, *The Daily You,* chapter four.

[36] Kim M. Bayne, "Adknowledge rolls out web evaluation tool," *Advertising Age*, June 8, 1998.

[37] The specifics of the "aggregated data" provided by Experian (also an AdForce investor) are unknown. Debra Aho Williamson, "Targeting distinguishes AdForce from the pack," *Advertising Age*, March 1, 1999.

that during this period Experian was transitioning from primarily a provider of financial information services to a much broader range of activity including consumer credit reporting and database marketing services.[38]

Historical records of offline purchasing behavior, thought by many marketers to be an accurate predictor of future purchases, were another elusive data source for ad infrastructure providers. DoubleClick's 1999 acquisition of the marketing information company Abacus Direct was primarily motivated by a desire to access Abacus' consumer profile databases containing the offline buying habits of some 88 million US households.[39] "Advertisers rely on demographic information to target ads when they don't have anything else," said DoubleClick's Kevin Ryan, talking up the significance of the acquisition. "Transaction information is much better."[40]

Running up against growing public concern over online privacy issues and a consumer advocacy campaign, DoubleClick's move to integrate Abacus' databases, which included basic PII such as names, addresses, and telephone numbers, caused a public relations debacle and spurred a larger public policy battle. To merge Abacus' information with its own database, DoubleClick reversed its privacy policy and began to "collect personally identifiable information … through an alliance of undisclosed, data-sharing sites," in order to match online and offline profiles.[41] Explained in more detail in chapter five, it is sufficient to note here that although

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[38] Experian, "About Experian: History," http://www.experianplc.com/about-experian/history.aspx. In 2013 Experian held worldwide demographic data on "more than 500 million individuals in 250 million households and online behavior data on 25 million internet users across 5 million websites." Experian, "About Experian: Principal Activities," http://www.experianplc.com/about-experian/principal-activities/marketing-services.aspx

[39] Rothenberg, "An Advertising Power."

[40] Rothenberg, "An Advertising Power."

[41] Ira Teinowitz and Jennifer Gilbert, "Online privacy disputes reach FTC panel, courts," *Advertising Age*, January 31, 2000. DoubleClick essentially formed a new network, Abacus Online, to integrate the two databases. "Participating websites would identify users by name but were required to post a notice explaining the information to be collected and giving users the opportunity to opt out. … Sites participating in Abacus Online not only allowed clickstream data to be collected, but they also collected personal information when individuals identified themselves to the site; e.g., when they made a purchase, completed a survey, or signed up for a drawing. With that personal information the ID number assigned to the cookie on the computer could be associated with the user. The click-stream data then could be combined with Abacus Direct's database of offline information. DoubleClick operated

DoubleClick's intention to integrate Abacus's data with its own was the most prominent example of the increasing intrusiveness of consumer profiling, it was by no means an outlier.[42]

By 2000 the leading ad infrastructure providers had amassed profile databases of unprecedented size: DoubleClick's contained 120 million entries, CMGI's Engage's contained 70 million, MatchLogic's 65 million, and 24/7 Media's 60 million.[43] The trend was pervasive throughout the sector to the extent that the data systems provider Oracle reported a 30% increase in companies looking to build enterprise-class data warehouses during the period and explicitly linked the demand to internet companies looking to store hundreds of terabytes of data collected from the web.[44] At the time only the largest "bricks-and-mortar" businesses had compiled databases in the terabyte range, and even then only after years of data collection. DoubleClick alone forecasted that it would be "pulling in about a terabyte of data every day" by the end of 2000.[45] The significantly smaller MatchLogic collected clickstream data from over 1 billion daily transactions and maintained 15 data warehouse locations.[46] Sustaining this level of consumer surveillance required advanced technical architecture and expertise.[47] DoubleClick possessed a standing army of some 725 ad and media servers, while Engage recruited a "VLDB" (very large database) expert from Fidelity Investments to serve as chief technology officer.[48]

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one such site, Netdeals.com, where users could sign up for drawings for prizes, giving their name, age, and street and e-mail addresses. Users who agreed to receive 'valuable offers' were added to its database." David P. Baron, "DoubleClick and Internet Privacy [Stanford Graduate School of Business Case no. P-32]," August, 2000.

[42] E.g. AOL came under fire for creating an ad targeting system based on "matching users' personal information with data from offline direct marketing companies such as Polk Co. and MetroMail Corp." Patricia Riedman, "AOL taps offline databases in ad targeting quest," *Advertising Age*, October 20, 1997.

[43] DoubleClick, *2000 Annual Report*, 8; Norm Alster, "Can CMGI Stop the Bleeding?" *BusinessWeek*, September 25, 2000; Federal Trade Commission, *Online Profiling: A Report to Congress* (June 2000), 6; Vonder Haar, "Data chase."

[44] Rick Whiting, "Web data piles up," *InformationWeek*, May 8, 2000.

[45] Whiting, "Web data piles up."

[46] Whiting, "Web data piles up."

[47] "How To Get The Most Out Of Your Web Marketing Efforts," *InternetWeek*, July 13, 1998.

[48] Whiting, "Web data piles up."

The enlargement of these surveillance practices was directly linked to marketer uncertainty concerning ROI. As *Adweek* reported:

> No one really knows just what data matters in predicting what consumer will respond positively to an ad. Since nobody knows the answers to the big questions, companies are tracking everything they can now, with the idea of figuring out what's important later.[49]

"People are erring on the side of collecting too much data rather than too little," admitted a dotcom executive.[50] One outgrowth of this development (again, taken up fully in chapter five) was a race to the bottom concerning consumer data collection practices that inflamed public concerns over online privacy issues, bringing them to the national public policy stage. Within the logic of the marketing complex however, these practices were accepted as necessary "for mainstream advertisers to do more than kick the tires of online advertising."[51] The implementation of externally sourced profiling was heralded as "a huge step forward in targeting" while combining offline and online behavioral data was viewed as "the ultimate home run."[52] As "our master's voice" was augmented by "our master's eyes and ears," industry rationalized surveillance as beneficial to consumers.[53] "Not only do users receive more relevant content, but such targeting prevents them from having to see the same ads repeated."[54] Privacy concerns were largely shrugged off until advocates mounted a credible challenge by putting pressure on Congress and the Federal Trade Commission.

If restricted to their own local networks of affiliated sites, the sheer magnitude of these consumer information hoards alone would represent a major advance in online profiling and ad

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[49] Vonder Haar, "Data chase."
[50] Vonder Haar, "Data chase."
[51] Riedman, "AOL taps offline databases."
[52] Riedman, "AOL taps offline databases."
[53] James Rorty, *Our Master's Voice* (New York: John Day, 1934).
[54] Riedman, "AOL taps offline databases."

targeting. However, the second fundamental component of the construction of a surveillance infrastructure was based on the wider distribution and deployment of these data beyond any single company or ad network. During this period the consumer profile was incrementally unshackled from its proprietary confines via practices of *data exchange* that were implemented broadly among otherwise competing entities. These arrangements took various forms, but most configurations integrated behavioral and externally sourced profiling to some extent. As noted above, behavioral profiling services like post-click analysis (e.g. DoubleClick's Spotlight service) were dependent upon data exchange among ad services providers and their marketer clients.

One example is found in what Engage called "Real-Time Visitor Intelligence," an application of behavioral targeting and data exchange that gave any web publisher the ability to deliver targeted ads to first-time visitors.[55] While data capture was still limited to sites within the Engage network, the company sold the capacity to personalize ads (and content) based on its profile database to *non-affiliated sites*, thus allowing them to achieve "first-time relevance." As promoted on the Engage website: "As soon as a visitor clicks on your website, you can use information about their previous internet activities to provide them with customized web pages, targeted ads, promotions, products and services – even if it's their first visit to your site."[56]

NetGravity's Global Profile Service advanced this trend one step further by combining profile information from entirely separate infrastructure providers using a shared database and "global cookie system." Prior to its acquisition by DoubleClick, NetGravity announced the service in partnership with competitors Aptex Software and MatchLogic. The model was premised on the anonymous integration of the three companies' profile databases into a single

[55] Rick E. Bruner, "Engage and AdSmart team up to offer improved ad targeting," *Advertising Age,* January 19, 1998.
[56] Engage, "Engage.Knowledge(TM)."

shared system that could provide "comprehensive summaries of web viewers' demographics and lifestyles."[57] Though seemingly never fully implemented, the service was a prototypical version of the "cookie-matching" model for sharing consumer data across websites that has come to fruition today.[58]

Perhaps the most illustrative example of the surveillance infrastructure's integrative potential was the introduction of what is now known as "behavioral remarketing" or "retargeting." This strategy demonstrates the cumulative character of infrastructure development through its incorporation of behavioral profiling, externally-sourced information, and data exchange. Geared toward online merchants, the basic principle of remarketing is to engage individuals who have previously "shown interest in a product or service category by following them and showing ads for the product or service they initially eyed as they surf elsewhere on the web."[59] In 1999 DoubleClick introduced Boomerang, one of the first branded remarketing services. DoubleClick claimed the service would enable marketers to target "precisely the individuals who have displayed an explicit interest" in their products or services and offered the capability to reach these consumers across the expansive DoubleClick network.[60] A range of behavioral profiling variables was made available to Boomerang subscribers. According to promotional materials: "With this powerful new capability, you [a marketer] can now target

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[57] Steven Vonder Haar, "NetGravity Gathers Audience Data," *Inter@ctive Week*, October 19, 1998.
[58] Technical description of how the NetGravity exchange worked: "Viewer surfs to a site operated by a publisher subscribing to the NetGravity profiling service. NetGravity server checks for a global NetGravity identification code stored on user's browser. NetGravity system simultaneously issues request to servers of Aptex and MatchLogic to determine whether each company has placed its own identification code on the cookie of the user's browser. Aptex and MatchLogic return confirmation, providing NetGravity proprietary identification code used to anonymously link specific users with their profiles. NetGravity records the identification information, allowing it to immediately integrate profile information the next time a user visits one of its client sites. A NetGravity central database integrates profile information collected by Aptex and MatchLogic, creating a more detailed, but still anonymous, description of a user's demographics and lifestyle." Vonder Haar, "NetGravity Gathers Audience Data." This was precursor to the "cookie-matching" functionality described by Turow in *The Daily You*.
[59] Dan Yomtobian, "Remarketing: Online's Misunderstood Conversion Tool," *Search Engine Watch*, July 9, 2010, http://searchenginewatch.com/article/2049484/Remarketing-Onlines-Misunderstood-Conversion-Tool
[60] DoubleClick, "Boomerang," archive captured August 15, 2000, http://web.archive.org/web/20000815064513/http://www.doubleclick.net:8080/advertisers/network/boomerang/

customized lists of your prospects and customers based on their activity on your site and encourage them to come back. … For example, you can target consumers who have: visited your site, visited a specific section or product page on your site, purchased products on your site, visited your site but not made a purchase."[61] Externally sourced profile information was available for integration as well: "In addition to web behavior, off-line purchase history data and demographic data can be appended to create lists for the most precisely targeted campaigns."[62]

Of course, in order for remarketing to work, data had to be continuously exchanged between ad service providers and marketers. Once properly configured, marketers could deploy highly targeted ad messages with the capacity to follow specific users or specific categories of users as they traversed the web. It was the online equivalent of a mattress salesperson getting in the backseat of your car as you left the showroom, quietly riding along with you to the movie theater, and then tapping your shoulder during the show to remind you of the upcoming President's Day Sale Extravaganza. Or, in a different iteration, the salesperson might also approach other theater patrons who have displayed browsing patterns or offline purchasing activities similar to your own under the working hypothesis that they too, might be in the market for in a new box-spring. Despite its considerable "ick factor," remarketing is widely used today and is considered among the most effective forms of contemporary online advertising.

The practices and technologies of surveillance infrastructure were applied more broadly to areas of marketing beyond advertising. One such trend saw online retailers begin to outsource the collection and analysis of their customer data to companies such as Coremetrics, now a part of IBM.[63] Using the same basic technologies and market relationships employed by ad infra

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[61] DoubleClick, "Boomerang."
[62] DoubleClick, "Boomerang."
[63] IBM, "IBM closes acquisition of Coremetrics," August 2, 2010, http://www-03.ibm.com/press/us/en/pressrelease/32248.wss

providers, Coremetrics compiled information about online shoppers in order to aid retailers' customer relations efforts. Given access to retailers online storefronts, Coremetrics was able to "extract personally identifiable information such as names, addresses and phone numbers from online forms filled out during the checkout process."[64] In theory, this gave the company the ability to easily combine customer profiles from its entire roster of 40 clients, including Wal-Mart and Toys "R" Us. Though Coremetrics argued that doing so would violate the terms of its contracts, data exchange of this nature opened possibilities for such practices going forward.

While contemporary observers are now beginning to examine surveillance infrastructure-enabled marketing – sometimes referred to as "Big Data" – the roots of these practices in the dotcom era have been widely overlooked. In 1999, marketing information broker Acxiom debuted a service that enabled companies to consolidate their own stores of customer information into an optimization system designed to unlock various uses of the data and combine it with Acxiom's own massive Data Network.[65] Through alliances with other data brokers, Acxiom made these combined marketing profiles available a la carte to many more companies for real-time integration with internet applications from advertising to e-commerce. The types of services offered by Acxiom and Coremetrics signal a broader appropriation of surveillance across various industries and the concomitant reorientation of business strategy around the collection and exchange of consumer information.

The Rhetoric and Reality of Surveillance Infrastructure

Throughout this period, marketers continued to push for more rationalized forms of advertising and sought to use their influence to control the internet medium to the greatest extent possible. Even with better targeting and rich media augmentations, the banner ad format proved limited in

[64] Stefanie Olsen, "Toysrus.com drops tracking service amid pressure," *CNET News*, August 14, 2000, http://news.cnet.com/Toysrus.com-drops-tracking-service-amid-pressure/2100-1017_3-244439.html?tag=mncol
[65] Marcia Stepankek, "Weblining," *BusinessWeek*, April 3, 2000.

its ability to capture consumer attention and failed to produce results that met the expectations of transcendent visions of "one-to-one" marketing.[66] Still in 1998, major packaged goods advertisers such as Proctor & Gamble hesitated to pay for brokered banner ads, preferring to invest in creating their own branded websites.[67] Marketers also partnered with media conglomerates and others to develop ill-fated "push" content systems that attempted to replicate the broadcast method of media delivery. Moreover, despite their advancements, ad targeting systems remained far from perfect. Much was made of instances of targeting gone wrong – flogging home mortgages on sites aimed at children, for example – that undermined the rhetoric of precision put forth by ad infrastructure providers.[68] Even for well-executed targeting services, click-through rates might increase as new programs were implemented, but would often dissipate as novelty wore thin.[69]

Fully aware of the importance of positive publicity and the appearance of forward momentum for attracting marketers as well as investors, online ad executives often oversold the capabilities of their services and technologies in the media and especially the advertising trade press. As such, there was a heavy dose of irony in statements like those by Paul Schaut, CEO of Engage Technologies, who told *Adweek* in 1999: "Now, we don't have to wave our arms to talk about the promise of profiling. We have arrived."[70] Infrastructure providers, and Engage in particular, had indeed greatly improved and expanded their profiling capacities, but they had not "arrived" in the sense of fulfilling any "promise of profiling." Claiming that the waving of arms

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[66] Ross McGhie, "Internet Advertising: The Internet as a Commercial Mass Medium," (master's thesis, Carleton University, 2003). This critique has persisted. In a 2012 piece in the *MIT Technology Review* Michael Wolff argued "At the heart of the internet business is one of the great business fallacies of our time: that the web, with all its targeting abilities, can be a more efficient, and hence more profitable, advertising medium than traditional media." Michael Wolff, "The Facebook fallacy," *MIT Technology Review,* May 22, 2012, http://www.technologyreview.com/news/427972/the-facebook-fallacy/?p1=A3

[67] Dan Schiller, *Digital Capitalism: Networking the Global Market System* (Cambridge: MIT Press, 1999), 132.

[68] Seth Fineberg, "Dot-com sea change forces ad networks to rethink strategies," *Advertising Age*, October 30, 2000.

[69] Kathy Sharpe, "Web punctures the idea that advertising works," *Advertising Age*, September 13, 1999.

[70] Vonder Haar, "Data chase."

was no longer necessary was in fact a clear example of vigorous industry arm waving. In this respect a critical distance must be maintained when interpreting the words of online ad companies and industry analysts.

It might be expected that the gap between the rhetoric and reality of surveillance infrastructure's execution might have curtailed marketer spending throughout the dotcom period. After all, some among them, especially big brand advertisers, had been complaining about the medium's shortcomings from the start. But ignoring the internet was never truly on the table for marketers. As Dan Schiller has argued, confronted by the net's exploding popularity and uncertain commercial development, "individual companies and whole industries … had little choice but to spring into action."[71] Matt McAllister frames the situation as a love/hate relationship that centered around the issue of marketer control.[72] Marketers loved the prospect of more control over consumer information in order to target messages to specific markets, but were deeply concerned about extending the economic control they have historically wielded over media systems to the emerging internet. Writing in 1995, McAllister argued: "If advertisers sense that computers [and the internet] offer them more control than they had before, then they will exploit these digitized opportunities to the hilt. If advertisers sense that computers offer less control than they had before, then they will do everything they can to turn that around."[73]

Thus, while pushing for increasingly sophisticated targeting and profiling, traditional marketers simultaneously began to adopt the internet as an advertising channel – imperfect as it was – in earnest during the latter stages of the dotcom bubble. The total value of online ad

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[71] Schiller, *Digital Capitalism*, 99-101.
[72] Matthew McAllister, *The Commercialization of American Culture: New Advertising, Control, and Democracy* (Thousand Oaks, CA: Sage, 1996).
[73] McAllister, *The Commercialization of American Culture,* 225-6.

spending among a sample of ANA companies tripled from 1998 to 1999.[74] Data compiled from *Advertising Age* showed that while in 1998 just 19 of the largest 100 national marketers advertised on the internet, by 1999 that number had jumped to 87.[75] The total number of ad impressions purchased by the top ten traditional marketers increased by a factor of five from 1999 to 2000, while aggregate online ad spending more than doubled from 1998 to 1999 and nearly did so again from 1999 to 2000.[76]

Again, the example of Procter & Gamble is illustrative. In 1994, P&G was among the first to articulate the marketing complex's collective need to ensure that the new interactive media would serve advertisers' interests. Thereafter it quickly became one of online advertising's most strident critics, explicating the medium's deficiencies regarding brand advertising, while engaging in experimental outlays to test the waters.[77] In 1998 it hosted the FAST Summit as a forum to address marketer concerns, again publicly denouncing the internet's usefulness. "The current state of web advertising just isn't effective enough to warrant any truly meaningful investment from us," said P&G's vice-president of advertising.[78] A year later however, P&G was named *Advertising Age's* interactive marketer of the year. The trade publication lauded the company's "tremendous influence in leading the industry, along with its own real commitment to the medium in ad spending and creation of innovative, successful

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[74] Stuart Elliott, "A study says many traditional marketers are quickly becoming devotees of cyberspace," *New York Times*, May 9, 2000.

[75] Advertising Age DataCenter, "100 Leading National Advertisers," *100 Leading National Advertisers: 1999 edition*, September 27, 1999, http://adage.com/article/datacenter-advertising-spending/100-lna-1999-edition-index/106380/; Advertising Age DataCenter, "100 Leading National Advertisers," *100 Leading National Advertisers: 2000 edition*, September 25, 2000, http://adage.com/article/datacenter-advertising-spending/100-leading-national-advertisers-2000-ed/106405/

[76] 1999 totals are annualized, so they are likely low. "Net Results," *Advertising Age* [Interactive Supplement], November 1, 1999; "Net results," *Advertising Age*, February 26, 2001; Interactive Advertising Bureau, *2000 IAB Internet Advertising Revenue Report* (April 2001), 6.

[77] During this period the company repeatedly tried to influence the development of the online ad market, – sometimes successfully, sometimes not – but made no significant spending contributions. Turow, *The Daily You,* 62-3.

[78] Kate Maddox, "Net gains credibility as ad medium," *Advertising Age*, April 26, 1999.

campaigns."[79] The very same executive quoted above explained the reversal of course in these terms: "The interactive world is where consumers are going, where it's happening, and we *need* to be there."[80]

This was of course the very period of transition from online advertising's first phase of local surveillance to the more robust and dynamic surveillance infrastructure. And as infra providers developed more comprehensive arrays of ROI-centric services, they won business from some of their biggest detractors: advertising agencies. The trade press described an accelerating trend in which agencies turned to "outsiders possessing technological muscle or centralized in-house staffs to serve their ads."[81] Of course this was no act of benevolence; agencies partnered with infra providers in response to marketers' requests for "proof that their online campaigns [were] paying off."[82] Those that did not have the ability to meet these expectations were forced to contract outside help. In many respects, agencies and their media buying components held the keys to marketer ad spending and in 1999 they began to unlock the floodgates. A significant portion of this money went to the ad infra market leaders, which contributed further to the sector's ongoing consolidation. By 2000 DoubleClick alone managed ad campaigns for over half of the Fortune 100 companies.[83]

Forced to enter the game, marketers focused their energies on shaping the web's commercial development to serve their needs. And in these efforts they were unmistakably successful, collectively setting the agenda for the burgeoning online ad industry. As the CEO of Engage put it: "We've always thought the marketer is the one with the power, so we are

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[79] Kate Maddox, "P&G: Interactive marketer of the year," *Advertising Age*, May 3, 1999. The company doubled its online ad spending from the year prior, though the figures still represented less than 1% of its total ad budget.
[80] Maddox, "P&G: Interactive marketer of the year." Emphasis added.
[81] Jennifer Gilbert, "Agencies centralize web serving," *Advertising Age*, March 1, 1999.
[82] Gilbert, "Agencies centralize web serving."
[83] DoubleClick, *2000 Annual Report*, 6.

innovating for them."[84] This is unsurprising given that even as the top tier of ad infra providers grew into giants, they betrayed persistent fragility. At the height of its power, DoubleClick remained heavily dependent upon risk capital and just a handful of major clients. For an extended period, AltaVista alone accounted for nearly half of all its revenues.[85]

Taking all of this into consideration allows for a nuanced interpretation of *Adweek*'s heralding in late 1999 of the arrival of a "golden age of online data," in which "more than ever before, publishers, marketers and advertising service companies [were] racing to compile mounds of information that help them track where people go on the web, who clicks on ads, and who ultimately winds up buying."[86] The "golden age" bit falls somewhere between sensationalist reporting and the gloss of an industry flack, but the basic description of surveillance infrastructure development was right on the mark.

Marketing Convergence & the Political Economy of Internet Advertising

To summarize, this history can be boiled down to a parallel set of trajectories. Fueled by finance capital and responding to marketer demands, ad infrastructure providers scaled up their capacity to serve ads and conduct consumer surveillance, which made online advertising more extensive and invasive (if not more effective), and more readily available to marketers than ever before. Though remaining unsatisfied with their level of control over advertising processes and the effectiveness of campaign results, traditional marketers nevertheless began to embrace the internet as an ad medium and exerted their influence to steward the development of the surveillance infrastructure in particular.

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[84] Fineberg, "Dot-com sea change." Emphasis added.
[85] Thomas E. Weber, "Red Flags From Leading Web-Ad Seller," *Wall Street Journal*, December 18, 1997.
[86] Vonder Haar, "Data chase."

These events signaled an acceleration of an ongoing reconfiguration within the marketing complex whereby consumer data was placed at the heart of marketing practices.[87] This trend applied across the board among publishers, advertising agencies, consumer information providers (e.g. Experian), marketers themselves, and the new online ad infra providers like DoubleClick. Established roles shifted as these actors "jockeyed" for control "over what suddenly appeared to comprise shared turf."[88] Even as new practices of surveillance and ad targeting were implemented on a competitive and ad hoc basis, elements of the marketing complex began to converge around the notion of the centrality of consumer data.

A 2003 letter to shareholders by the new CEO of DoubleClick, Kevin Ryan, articulated the essence of this *marketing convergence*. With his company emerging from the dotcom collapse leaner and finally profitable, Ryan emphasized that the key to making surveillance infrastructure work was to be found in new forms of cooperative business arrangements and the crossing of established industry boundaries concerning the collection, analysis, and deployment of marketing data. His remarks are worth quoting at length:

> "It has become clear that the old business silos of direct marketing versus brand advertising, or offline versus online media development, or the marketing area versus the IT department, no longer make sense. The common trait possessed by the most effective marketers and advertisers is that they have broken down these walls and allowed the groups to learn from each other's experiences. Successful companies must aggregate customer data from various channels in order to have a holistic view of their customers. They need the ability to measure the effectiveness of their campaigns across these various

[87] Robins and Webster, "Cybernetic Capitalism"; Joseph Turow, *Niche Envy: Marketing Discrimination in the Digital Age* (Cambridge: MIT Press, 2006); Joseph Turow, *Breaking Up America: Advertisers and the New Media World* (Chicago: University of Chicago Press, 1998).
[88] Schiller, *Digital Capitalism*, 101.

media. They also need technology to integrate their sales, customer service, IT, marketing, and advertising efforts."[89]

Marketing convergence is the corollary to surveillance infrastructure. Consumer data became the focal point in the perpetual struggle to increase efficiency and maximize investment returns, which demanded "breaking down the walls" that separated marketers and their intermediaries. The evolution of ad infrastructure providers epitomized these developments. Thus, as DoubleClick's NetGravity subsidiary began to pursue the surveillance infrastructure model, its former identity as an ad server hardware provider converged with other marketing functions. The company began to work not only with publishers, but also with marketers and merchants, and its services became increasingly integrated with its clients' own customer databases. "Is the business consulting or hardware?" asked *Advertising Age*. "Once the server is installed, there's a lot of time, resources and intellectual property that gets shared among clients, agencies and third-party ad servers."[90] Distinctions among these parties blurred as formerly separate activities came together to facilitate the emerging surveillance infrastructure and assert the marketing function online. "All this means vendors such as NetGravity will be working even more closely with advertisers, agencies and publishers in the future," said a company executive. "It's not a piecemeal approach."[91]

It is important to note that "working closely" did not foreclose all forms of competition. Although companies like DoubleClick had achieved early dominance in some areas, battles for control over the processes and outputs of the surveillance infrastructure were ongoing and contributed fundamentally to its progression. Major marketers especially sought to overpower ad infra providers whenever possible. As early as 1997 General Motors dabbled in creating its own

[89] DoubleClick, *2003 Annual Report*, iii.
[90] Dana Blankenhorn, "NetGravity puts emphasis on solutions," *Advertising Age*, March 1, 1999.
[91] Blankenhorn, "NetGravity puts emphasis on solutions."

web ad servers, seeking to bypass ad infra providers and interface with publishers directly.[92] Later, Procter & Gamble, IBM, Ford, and others claimed ownership over data gathered from their ad campaigns and moved to restrict its distribution and use.[93] Ford prohibited its partners from selling its campaign data or using it to offer ancillary services, while other marketers mandated that their data be segregated from the bigger pools used to create web-spanning user profiles.

Ultimately though, the majority of the marketing complex – including the upstart infra providers – shared an overriding common interest in stewarding the internet's transformation into a commercial media system dependent upon their patronage. This interest was manifested through the parallel advance of surveillance infrastructure and marketing convergence and explicitly expressed in gatherings such as P&G's FAST Summit and the formation of trade groups such as the Networking Advertising Initiative.[94] As *Advertising Age* observed: "While industry leaders may disagree about the mechanics of developing internet ads and whether the internet is better for branding or e-commerce, the most important aspect to come out of FAST is that parties who used to sit at opposite sides of the table are now working together to figure out how to make the internet work as an ad medium."[95]

Surveillance infrastructure development was driven by marketers' overarching needs to bring the internet into the marketing complex and, to the greatest extent possible, maximize its utility for purposes of selling. These needs are expressions of more general dynamics of capitalism – the driving force of *commodification* and the problem of *overproduction*. Commodification is the dynamo within capitalist economies that drives profit making and brings

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[92] Debra Aho Williamson, "Net effect: Who should serve ads?" *Advertising Age*, April 28, 1997.
[93] Kathryn Kranhold and Michael Moss, "Keep Away From My Cookies, More Marketers Say," *Wall Street Journal*, March 20, 2000.
[94] Beth Cox, "Profiling Firms Defend Themselves, *ClickZ*, November 10, 1999.
[95] Kate Maddox, "Marketers debate FAST's outcome," *Advertising Age*, September 7, 1998.

relations of exchange to new areas of social action (the "accumulation of capital").[96] As Schiller argues, the long history of capitalism has been "sustained by ceaseless enlargement of markets for commodities and this trend continues today in information and culture."[97] Since the latest period of general economic stagnation that began in the 1970s, capitalists have been forced to aggressively seek out new markets, incorporating information and communication technologies into the heart of these efforts. This has taken a range of forms including movements to expand transnational market relations, extend intellectual property regimes, and create advertising-supported media systems.

These developments have been characterized as responses to the recurrent problem ("internal contradiction") of overproduction, which is manifested in part by the relentless need to create and maintain consumer demand for the torrent of products and services created by a capitalist economy dependent upon perpetual growth.[98] Framing the issue in this way provides a particular understanding of advertising's historical basis as the "pan-corporate need to harness consumption to production … whether or not it succeeds efficiently in any given instance."[99] Processes of commodification have been deeply intertwined with the advance of information and communication technologies, of which the internet and the world wide web are among the most public-facing components.[100]

The construction of an advertising-focused surveillance infrastructure on the internet is thereby an expression of the acceleration of commodification and a mechanism whereby capitalist social relations are reproduced anew. Increasingly, engaging in consumer surveillance

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[96] Vincent Mosco, *The Political Economy of Communication: Rethinking and Renewal* (Thousand Oaks, CA: Sage, 1996).
[97] Schiller, *How To Think About Information*, 23.
[98] David Harvey, *Enigma of Capital: And the Crises of Capitalism* (New York: Oxford University Press, 2010).
[99] Schiller, *Digital Capitalism*, 124.
[100] Schiller, *How To Think About Information*, chapter three; Herbert I. Schiller, *Information and the Crisis Economy* (New York: Oxford University Press, 1984).

is "simply the price of entry" for marketers within a global capitalist system struggling to overcome barriers to growth.[101] Marketers make designs upon the internet "not because of some peripheral momentary whim to test unknown waters. They act, rather, as the representatives of a generative social force."[102] With this understanding, critical media studies can offer an analysis of what are perhaps some of the unintended social outcomes of this generative capacity.

Social Challenges of Surveillance Infrastructure

"The real winner in all of this will be the consumer." –Kevin O'Connor.[103]

This section outlines some of the contemporary social challenges that have arisen from the development of an internet-based surveillance infrastructure and makes connections to relevant literature in the area. Discussion is limited to two interlocking issues: marketing-based discrimination and the problem of "digital enclosure." In 1993 Oscar Gandy wrote a sobering book called *The Panoptic Sort*, which articulated a theory of information technology-based surveillance through which individuals and groups are "sorted according to their presumed economic or political value."[104] Looking at a range of examples from credit reporting to the data collection of the US Census Bureau, Gandy warned of an emerging system of classification that enabled "organized interests, whether they are selling shoes, toothpaste, or political platforms, to identify, isolate, and communicate differentially with individuals in order to increase their influence over how consumers make selections among these options."[105] Gandy's work not only draws attention to the longer history of consumer surveillance, but the contours of his general critique apply to modern online advertising practices.

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[101] Stacey Lynn Schulman, "Hyperlinks and marketing insight," in *The Hyperlinked Society*, ed. Joseph Turow and Lokman Tsui (Ann Arbor: University of Michigan Press, 2008), 145-158.
[102] Schiller, *Digital Capitalism*, 124.
[103] Raju Narisetti, "Technology (A Special Report): Pieces of the Puzzle – New and Improved: Ad experts talk about how their business will be transformed by technology," *Wall Street Journal*, November 16, 1998.
[104] Oscar H. Gandy, *The Panoptic Sort: A Political Economy of Personal Information* (Boulder, CO: Westview, 1993), 1.
[105] Gandy, *The Panoptic Sort*, 2.

Gandy's overarching concern was that information technology-based sorting engenders forms of discrimination in accordance with institutionalized biases of "race, gender, age, class, culture, and consciousness."[106] With the advent of the surveillance infrastructure era, sorting practices of this exact nature have moved to the forefront of the marketing agenda. Joseph Turow has documented the progression of this trend whereby marketers increasingly use profile databases "to determine whether to consider particular Americans to be targets or waste."[107] These are not Turow's terms; they are part of a marketing vernacular used to describe potential and current customers. The point is to differentiate between the two groups in order to engage them differently, or in some cases, not at all.

While practices of tailoring ad messages to specific audiences are not new, they are greatly intensified online where the decades-old transition from "mass to class marketing" achieves new magnitudes of realization.[108] Behavioral and externally sourced profiling of individuals is of a qualitatively different character than the probability-based methods used to analyze and target mass media audiences.[109] For instance, the classification of individuals and groups based on social class is greatly enhanced by practices of dynamic consumer profiling that combine past purchasing records with behavioral and demographic information. The shift is significant: "For decades, marketing and media firms learned as much as they could about social groups and then tried to target people they thought were members of these groups. The emerging process is almost the opposite: They learn enormous amounts about individuals, consign them to various groups, and then determine whether and how they want to deal with them."[110]

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[106] Gandy, *The Panoptic Sort*, 18.
[107] Turow, *The Daily You,* 88.
[108] Schiller, *Digital Capitalism*, 135.
[109] Schiller, *Digital Capitalism*, 138. While television and other media are increasingly developing database-driven and behavioral profiling techniques of their own, the internet has been the leading edge of this progression, especially in the late 1990s.
[110] Turow, *Niche Envy*, 186.

The issue is amplified considerably when personalization extends beyond commercial messages to media content, interactive service offerings, and beyond. According to Turow, the potential for such personalization occurs via a shift in media relations whereby the power of publishers/content producers declines vis-à-vis other groups within the marketing complex.[111] Although he does not describe it in these terms, Turow is signaling a disruption of the 20th century audience commodity model of commercial media production.[112] This well-established business structure is premised on a basic relationship whereby content created by media companies serves as a proxy for audiences. Seeking direct links to consumers, marketers reach them through commercial media conduits. Audiences, or more accurately, representations of audience attention, thereby become commodities produced by media companies, who then broker them to marketers.[113]

Media content becomes less important as a proxy for audiences when marketers can reach consumers directly via targeted advertising across a range of web destinations and interactive platforms. On the internet, marketers still purchase access to consumers as they have on other media platforms. What the surveillance infrastructure makes possible is an alternative formulation of this process that can be considerably distanced from any specific publisher or instance of media content. A vivid example is found in the emergence of consumer data exchanges, which function as stand-alone marketplaces for buying and selling audience impressions. Companies such as eXelate and BlueKai enable "publishers to auction and media

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[111] Turow, *The Daily You.*
[112] Dallas W. Smythe, "Communications: Blindspot of Western Marxism," *Canadian Journal of Political and Social Theory*, 1 no. 3 (1977), 1-28.
[113] Eileen Meehan, *Why TV is Not Our Fault: Television Programming, Viewers, and Who's Really in Control* (Lanham, MD: Rowman & Littlefield, 2005). As Meehan has shown, intermediaries such as the Neilson and Arbitron ratings systems play important roles in these transactions.

agencies to 'buy' individuals with particular characteristics, often in real time."[114] As explained on BlueKai's website:

> "BlueKai manages the largest online intent data exchange that gives marketers, publishers and ad networks access to valuable data a-la-carte to impact in-market audience targeting. Our technology is based on aggregating anonymous behaviors from top tier ecommerce sites, which then goes through a classification process. It is then made available in our exchange for bidding, purchase, and immediate influence on real-time campaign targeting. We do not own [advertising] inventory and do not serve ads – we simply enable our partners to use our quality data to deliver better targeting across their media."[115]

Consumer data exchanges are contemporary extensions of the "re-intermediary" strategy developed by DoubleClick in the dotcom period. Marketers are presented with a qualitatively different kind of access when companies such as BlueKai or DoubleClick claim to be able to reach not just a particular type of consumer, but a particular individual, through a media-neutral distribution system that spans the web. In this system, media buying becomes somewhat of a misnomer and web publishers, no longer the primary arbiters of access to consumer attention, experience a loss of market power.

One outcome of this development is the acceleration of the historical undercutting of journalistic institutions. As Robert McChesney and John Nichols have shown, the most important of these by far, newspapers, have unfortunately also been the most seriously injured by

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[114] Turow, *The Daily You,* 5.
[115] "Bluekai Explain Their Data Exchange Platform And Hint At European Move," *Exchange Wire*, August 10, 2009, http://www.exchangewire.com/blog/2009/08/10/bluekai-explain-their-data-exchange-platform-and-hint-at-european-move/

their inability to replicate the print-based audience commodity model online.[116] Even while acknowledging the deep flaws systemic to commercial modes of news production, the collapse of newspapers in particular is deeply troubling, especially in the short term when the news vacuum is increasingly populated by public relations content. For some time now, companies such as Federated Media have provided marketers with opportunities to "sponsor independent publishers" to develop content about their brands in ways that "appeal to readers and spark conversation."[117] These types of "branded content" or "native advertising" are exploding on the web.[118] In just one example, *Forbes Magazine's* "BrandVoice" product allows marketers to "connect directly with the *Forbes* audience by enabling them to create content – and participate in the conversation – on the *Forbes* digital publishing platform."[119]

The next phase of the erosion of publisher market power, already underway, involves a growing tailoring of media content beyond advertising messages. Publishers, increasingly at the mercy of their advertisers, have few alternatives outside of facilitating such personalization. Marketers seeking the greatest advertising efficiency demand to follow users throughout the entire "funnel" of their media engagement. When it becomes possible to "trace a purchase all the way back to click-throughs on news stories, it doesn't take a whole lot of thinking to say let's change the content to maximize the opportunity for that person to click."[120]

The implications of these kinds of "mass customization" go beyond the increased willingness of publishers to break the "church-and-state" barrier that has historically (and imperfectly) separated media content from advertising. A general critique is that the trend

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[116] Robert W. McChesney and John Nichols, *The Death and Life of American Journalism* (Philadelphia: Nation Books, 2010).
[117] Federated Media, "Products and Platforms," http://www.federatedmedia.net/marketers/products/
[118] Tanzina Vega, "Sponsors now pay for online articles, not just ads," *New York Times*, April 7, 2013.
[119] *Forbes*, "Re-architecture: The future of media is here," http://www.forbesmedia.com/re-arch.html
[120] Jack Marshall, "Ad-targeting critic's view [interview with Joseph Turow]," *Digiday*, February 14, 2012, http://www.digiday.com/platforms/the-ad-targeting-critics-view/

promotes a culture of individualism and consumption. Some observers argue that sustained exposure to highly personalized media threatens to create "echo chamber" or "filter bubble" effects that limit contact with contradictory viewpoints and information beyond the orbit of self-interest.[121] Another liberal-democratic critique laments the loss of privacy engendered by such surveillance, but as Jeff Chester points out, "beyond the loss of privacy, we all should be alarmed about how interactive advertising is shaping the kind of programming and content available to us in the future."[122] Turow frames the issue in terms of the "reputation silos" constructed by marketers and media so that they might "present people who have been assigned specific reputations in the marketplace with preconceived views of the world and with opportunities based on those reputations."[123]

Along these lines, what other forms of marketing-based personalization might be rendered, and at what social costs? It is one thing when extensive profiles, compiled from disparate offline and online sources over which individuals have little knowledge or control, become the basis for the commercial messages they encounter on the internet. It is perhaps another when these processes dictate the availability of broader social opportunities or even material necessities. As Lori Andrews asks: "When young people in poor neighborhoods are bombarded with advertisements for trade schools, will they be more likely than others their age to forgo college? And when women are shown articles about celebrities rather than stock market trends, will they be less likely to develop financial savvy?"[124] Assessing these outcomes, Turow laments the dissolution of a media landscape that, while flawed, offered a pluralistic balance of

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[121] Cass Sunstein, *Republic.com*, (Princeton University Press, 2001); Eli Pariser, *The Filter Bubble: What the Internet is Hiding From You* (New York: Penguin, 2011).
[122] Chester, *Digital Destiny*, 26, 158.
[123] Turow, *The Daily You, 191.*
[124] Lori Andrews, "Facebook is using you," *New York Times*, February 4, 2012, http://www.nytimes.com/2012/02/05/opinion/sunday/facebook-is-using-you.html?pagewanted=all&_r=0

society-making mass media and segment-making niche media.[125] But even this critique underestimates the social costs of marketing-based discrimination.

As early as 2000, critics employed the term "weblining" to describe the practice of denying people opportunities on the internet based on their marketing profiles.[126] The label is a play on "redlining," a descriptor of older discriminatory practices based on geography whereby the boundaries of poor, often minority, neighborhoods were mapped in red to indicate that services such as banking or telecommunications need not be offered. This notion gets to the root of the issue, which is a hardening of social class along lines of difference whereby marketing practices reproduce social discrimination and economic exploitation on the internet and beyond. In this scenario, the marketing complex is doing more than just sorting profiles according to differential consumer typologies. It is creating a system that when functioning optimally catalogues individuals as either valuable or worthless to highly specific processes of profit maximization.

Keeping with the theme of finance in this study, I want to point to one example on the present-day frontier of marketing-based discrimination in the form of short-term consumer lending. In early 2013 *The Economist* reported that small market banks and short-term lending institutions – in conjunction with specialized consumer research companies – were beginning to use various marketing profile data to assess creditworthiness and adjust interest rates.[127] In addition to normal loan application information, these lenders create consumer profiles by analyzing thousands of internet-based indicators such as location data, behavioral information, purchasing records, device data, and information culled from social networking sites like

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[125] Turow, *The Daily You, 194.*
[126] Stepankek, "Weblining."
[127] "Stat oil," *The Economist*, February 9, 2013, http://www.economist.com/news/finance-and-economics/21571468-lenders-are-turning-social-media-assess-borrowers-stat-oil

Facebook. A startup called ZestFinance claims to examine 70,000 "signals" that are input into various underwriting algorithms to assess credit risk.[128] Unsurprisingly, many of these startups have been funded by the same venture capitalists that financed the development of the surveillance infrastructure during the dotcom bubble.[129]

Proponents argue that profiling of this nature optimizes credit markets, reduces risk for lenders, and opens up opportunities to borrowers who may have flawed credit scores according to conventional measures. The budding industry identifies those who qualify for loans but are unable to access them as "under-banked," a population estimated to be in the many millions. When in need of cash, those among the under-banked resort to exorbitantly priced cash advances ("payday loans") or go without. "Our mission [is] to use big data to save the under-banked billions of dollars in high fees," said ZestFinance's founder (and former Google executive) Douglas Merill .[130]

What do claims of optimizing credit markets signify in relation to the themes presented in this chapter? Clearly profile-based lending relies on an upgraded surveillance infrastructure that operates through practices of marketing convergence, as evidenced when social networking sites become arbiters of creditworthiness. Clearly, the mission of ZestFinance and others is not simply to provide credit opportunities to greater numbers of "under-banked" individuals. It is about *selling loans* to the "right kinds" of borrowers by dramatically expanding the informational terrain from which such classifications are made. In Merill's words, "We feel like all data is

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[128] Evgeny Morozov, "Your social networking credit score," *Slate*, January 30, 2013, http://www.slate.com/articles/technology/future_tense/2013/01/wonga_lenddo_lendup_big_data_and_social_networking_banking.single.html

[129] Morozov, "Your social networking credit score." These VCs include Kleiner Perkins Caufield & Byers and Netscape co-founder Mark Andreessen's firm, Andreessen Horowitz.

[130] Quentin Hardy, "Big data for the poor," *New York Times* [Bits Blog], July 5, 2012, http://bits.blogs.nytimes.com/2012/07/05/big-data-for-the-poor/

credit data."[131] As Evgeny Morozov notes, if all data is credit data, then is not all data marketing data as well?[132] There are already instances of profile-based lenders using consumer data to market additional financial products and other goods and services to existing customers. One UK-based lender entered into a sales partnership with a furniture retailer whereby its customers were given an exclusive opportunity to pay for furniture purchases via credit installments provided by the lender, high fees and interest rates notwithstanding.[133]

Of course, sorting is as much a practice of exclusion as inclusion, and the broader and more integrated the sorting becomes, the greater the potential for discriminatory practices. As early as 1999 Acxiom offered a service called InfoBase Ethnicity System that provided a "broad and precise breakdown of ethnic, religious, and minority classifications" that could be matched with name, income, housing information, and other demographic data.[134] According promotional materials, the service enabled marketers to reach, or perhaps ignore, categories of consumers as specific as "full-figured African American women." Neo, another start-up in the lending sector, collects "evidence to determine if making racist comments on Facebook is correlated with a lack of creditworthiness."[135] If lenders are currently building automated systems that purport to interpret racist remarks on the internet, it does not require a great imagination to envision how algorithmic constructions of race might factor into many more applications of surveillance-based marketing. A 2012 investigation by the *Wall Street Journal* showed that internet retailers routinely engage in price discrimination based on information obtained from consumer

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[131] Quentin Hardy, "Just the facts. Yes, all of them," *New York Times,* March 24, 2012, Nhttp://www.nytimes.com/2012/03/25/business/factuals-gil-elbaz-wants-to-gather-the-data-universe.html
[132] Morozov, "Your social networking credit score."
[133] Morozov, "Your social networking credit score."
[134] Stepankek,"Weblining."
[135] "Stat oil," *The Economist.*

surveillance.[136] What does it mean when different classifications of bodies, neighborhoods, and other markers of difference are indexed to creditworthiness and pricing? What about education or healthcare? Marketing-based surveillance of this nature extends beyond merely mapping the social territory as it is apprehended and begins to "dictate it along the segregated lines it reveals and then reinforces."[137]

Thinking through these questions returns us to the prescience of Gandy's work in this area. To illustrate the prejudicial capacity of the panoptic sort, Gandy recounted the systematic denying of mortgage credit opportunities to qualified minority applications based upon a discriminatory index of race that had been generated by pre-web automated loan processing systems.[138] As Tamara Shepherd argues, "target marketing does not just reflect user desires, it produces them in ways that are differential according to already existing structures of privilege."[139] In other words, discrimination is most likely to be exercised against lower income groups, non-whites, and women, who might be variously ascertained as "waste" by an inhuman and increasingly inhumane marketing apparatus.

Finally, and from a different register, this example bears mentioning the broader relationship of debt to consumption. For decades, exploding consumer debt has functioned as an essential prop to demand in the US economy as wages for most earners have stagnated.[140] In these circumstances, marketing-based discrimination in lending expresses a broader shift in

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[136] Jennifer Valentino-Devries, Jeremy Singer-Vine, and Ashkan Soltani, "Websites vary prices, deals based on users' information," *Wall Street Journal*, December 24, 2012.
[137] Rob Horning, "Social-media redlining and 'social enforcement,'" *The New Inquiry,* February 16, 2013*,* http://thenewinquiry.com/blogs/marginal-utility/social-media-redlining-and-social-enforcement/. Horning also wondered how long it would take before "the absence of such social-media presence becomes a [credit] disqualifier."
[138] Gandy, *The Panoptic Sort.*
[139] Tamara Shepherd, "Desperation and Datalogix: Facebook Six Months after its IP," *Culture Digitally*, December, 2012, http://culturedigitally.org/2012/11/desperation-and-datalogix/
[140] Robert W. McChesney, John Bellamy Foster, Inger L. Stole, and Hannah Holleman, "The Sales Effort and Monopoly Capital," *Monthly Review*, 60, no. 11 (2009).

advertising's historical role as a generator of demand. The mass marketing strategy was in many cases about selling as much as possible to as many as possible. While this model is by no means extinguished, it has been offset by changes in the marketing complex throughout in the latter part of the twentieth century and into the twenty-first. As described in this dissertation, this is the shifting ground upon which targeted advertising was developed in part to mitigate the dissolution of the mass audiences of the network television era. Surveillance-based marketing is about boosting profits by selling more to the right people, the flipside of which entails eliminating efforts to reach undesirable customers and even pruning existing customers that are deemed unworthy. These efforts are economically justifiable if efficiency gains compensate for the loss of customers, while increased adoption of surveillance-based marketing enables businesses to target only those prospects of value in the future. Clearly, this undermines the notion of the marketplace as a democratic space where sellers and buyers conduct mutually beneficial transactions on a more or less even playing field. Wherever exclusion can be implemented more profitably than inclusion, we should expect increasingly stratified and discriminatory markets within an increasingly stratified and discriminatory capitalism.

Industry is quick to point out that these surveillance systems are still under construction. An *Advertising Age* piece in March 2013 warned that the "Brutal Truth About 'Big Data'" was that marketers are haphazardly rushing to compile "bigger data haystacks without necessarily getting any better at figuring out how to find the needle, or what to do with the needle when they find it."[141] Likewise, casual observers of targeted advertising often dismiss it due to the inaccuracy of certain implementations. I would posit that these are very much a secondary issues. When Gandy was writing about the panoptic sort, the state of the art marketing surveillance tools

[141] Simon Dumenco, "The brutal truth about 'Big Data,' *Advertising Age*, March 18, 2013, http://adage.com/article/dataworks/brutal-truth-big-data/240364/

were credit score reporting, consumer surveys, and customer loyalty programs like frequent flyer programs. Even if data collection and analysis perpetually fall short of marketers' expectations, the socio-technical foundations of consumer surveillance are cemented within the prevailing system of capitalist development. As long as a surveillance infrastructure is animated by the desires of its operators, it will continue to identify, classify, and assign value.

Digital Enclosure and the Asymmetry of Data Control: Yours is ours, but ours is not yours

Revisiting themes introduced in the first chapter, the concept of "digital enclosure" offers a framework for evaluating the implications of an internet medium upon which surveillance has become a default setting.[142] Beginning with the appropriation of cookies for advertising purposes in 1996, the means for consumer data collection were effectively embedded within the web's technical architecture. Because this was still early in the web's evolution, and because cookies in particular were easy to implement within HTTP, they quickly became a standard tool of web development. Cookies had a variety of applications in online commerce and elsewhere, but in the hands of ad networks they became a staple of targeted advertising.

Soon after the appropriation of cookies by DoubleClick and others, industry observers anticipated their broad implementation and recognized the pressure web publishers would face to employ them for ad targeting purposes. "I don't see how any site can not use cookies. Advertisers will demand it," said one marketing executive.[143] By 2000 the *Wall Street Journal* surmised that it was "too late to tinker with cookies now. They power practically every online shopping cart and every paid advertisement. In less than six years, they've become part of the

[142] Although this discussion is limited to technical and economic considerations, there were also important public policy components, especially concerning the political struggle regarding opt-out and opt-in frameworks of consent. This is taken up in chapter five.
[143] "Tech firms promise new era of interactive selling," *Interactive Marketing News*, December 20, 1996.

fabric of the web."[144] Corroborating the *Journal's* claims, a series of studies by the Federal Trade Commission found the use of cookies for profiling web users to be "nearly ubiquitous."[145] The agency predicted "a 99% chance that, during a one-month period, a consumer surfing the busiest sites on the web will visit a site that collects personal identifying information."[146]

What was true in 2000 remains so today. Although the range of surveillance technologies has increased, cookies persist as a mainstay. A 2010 investigation revealed that the nation's 50 largest traffic-generating websites installed "on average 64 pieces of tracking technology onto the computers of visitors, usually with no warning."[147] Dictionary.com, owned by digital media conglomerate IAC/InterActive Corp, led the pack depositing some 234 tracking files.[148] Many websites and applications provide limited functionality with cookies disabled. Some are entirely unusable. At the time of this writing, attempting to login to the Facebook social networking site with cookies disabled produces the following message: "Cookies Required: Cookies are not enabled on your browser. Please adjust this in your security preferences before continuing."[149]

From an infrastructure studies perspective, this development can be understood as an outcome of "technological momentum," or "path dependence."[150] As Langdon Winner argued: "Because choices tend to become strongly fixed in material equipment, economic investment, and social habit, the original flexibility vanishes for all practical purposes once the initial

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[144] Thomas E. Weber, "The Man Who Baked The First Web Cookies Chews Over Their Fate," *Wall Street Journal*, February 28, 2000.
[145] Federal Trade Commission, *Online Profiling: A Report to Congress* (June 2000), 6.
[146] Federal Trade Commission, *Privacy Online: Fair Information Practices in the Electronic Marketplace* (May 2000), 9.
[147] Julia Angwin, "The web's new gold mine: your secrets," *Wall Street Journal*, July 30, 2010.
[148] Angwin, "The web's new gold mine."
[149] Facebook, https://www.facebook.com accessed February 12, 2013.
[150] Thomas Hughes, "Technological Momentum," in Merritt Roe Smith and Leo Marx, eds., *Does technology drive history?*, (Cambridge: MIT Press, 1994), 101-114.

commitments are made."[151] In this manner the implementation of surveillance infrastructure has "fundamentally altered the nature of surfing the web from being a relatively anonymous activity, like wandering the streets of a large city, to the kind of environment where records of one's transactions, movements and even desires could be stored, sorted, mined and sold."[152] This use of spatial metaphor, from no less radical an observer than the *New York Times,* evokes Mark Andrejevic's concept of "digital enclosure," described as the ongoing construction of an "interactive realm where every action generates information about itself."[153] The persistent monitoring of enclosed spaces forms the basis for the production of "secondary information commodities," (e.g. behavioral data) which become the property of those conducting the surveillance and over which subjects of monitoring have little knowledge or control.[154]

For Andrejevic, the digital enclosure concept signifies an important shift in media relations whereby participation in interactive spaces such as the internet is made to carry the conditions of surveillance. "Interactivity is not necessarily a two way street; more often than not it amounts to the offer of convenience in exchange for willing and unwilling submission to increasingly detailed forms of information gathering."[155] The term explicitly references a Marxist understanding of the land enclosure movements associated with the historical transition from feudalism to capitalism, which led to the formation of distinct social classes. Andrejevic argues that similar divisions have formed in privatized interactive spaces between those who control

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[151] Langdon Winner, *The Whale and the Reactor: A Search for Limits in an Age of High Technology* (University of Chicago Press, 1986), 29.
[152] John Schwartz, "Giving Web a Memory Cost Its Users Privacy," *New York Times*, September 4, 2001.
[153] Mark Andrejevic, *ISpy: Surveillance and Power in the Interactive Era* (Lawrence: University Press of Kansas, 2009), 2-4. Other scholars have employed Foucault's concept of panopticism to describe similar phenomena, though generally with less emphasis on political economic social relations. See Elmer, *Profiling Machines*. Gandy's work is a notable exception.
[154] Andrejevic is building on Mosco, who, following Meehan, developed the related concept of "cybernetic commodity." All of these approaches extend Smythe's theory of "audience commodity." See Smythe, "Communications: Blindspot of Western Marxism," Meehan, *Why TV is not our fault;* Mosco, *The Political Economy of Communication*; Robins and Webster, "Cybernetic Capitalism."
[155] Andrejevic, *ISpy,* 4.

them and those who submit to surveillance in order to gain access. The ironic outcome is an "asymmetrical loss of privacy" as individuals grow "increasingly transparent to both public and private monitoring agencies, even as the actions of these agencies remain stubbornly opaque in the face of technologies that make collecting, sharing, and analyzing large amounts of information easier than ever before."[156] Digital enclosure is thus an underlying condition of surveillance-based data collection that makes marketing-based discriminatory practices all the more injurious. Submission to surveillance is more than the price for the convenience of interactive media; it is increasingly the condition of access. Returning to the example of profile-based consumer lending, those who might wish to "take advantage" of such credit opportunities are required to submit to broad forms of surveillance in order to pursue social mobility, or perhaps to simply make ends meet.

A haphazard array of ad-blocking software and marketer "opt-out" mechanisms provides a veneer of individual autonomy and choice, but a majority of users lack the combination of awareness, technical savvy, and time required to direct their labor towards extricating themselves from digital enclosures. This claim is substantiated by surveys that indicate widespread disdain for profile-based advertising among internet users, but low levels of ad-blocking.[157] If people were truly empowered to opt out, it seems most would have done so already. In any case, those equipped to try risk giving up the applications and services for which submission to surveillance is a condition of access.

We do not own the information that is collected about us. In limited cases such as consumer credit reports, we may be entitled to review our profiles, for a small fee of course. In

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[156] Andrejevic, *ISpy, 7.*

[157] Kristen Purcell, Joanna Brenner, Lee Rainie, "Search engine use in 2012," *Pew Internet and American Life Project*, March 9, 2012, http://www.pewinternet.org/Reports/2012/Search-Engine-Use-2012/Summary-of-findings.aspx; Turow, *The Daily You*, 184-9.

others, consumers are granted no rights of access. Such is the circumstance with Acxiom, again, one of the country's largest marketing information companies and a major supplier of consumer data for online advertising. The company holds information about some 500 million consumers worldwide, with over 1,500 data points per person.[158] After a somewhat opaque process of requesting access to my own consumer profile via an online form and follow-up phone conversation, a representative from the company's Privacy Compliance Team informed me that Acxiom does not make marketing information available for individuals to review under any circumstances. I could however review my basic demographic information to check for errors. The present discussion of individual awareness and choice, or the lack thereof, regarding marketing surveillance sets up the final chapter of the dissertation, which addresses the conflicts among corporate lobbyists, civil sector privacy advocates, and government regulators regarding online data collection and privacy policy in the late 1990s.

[158] Natasha Singer, "Consumer data, but not for consumers," *New York Times*, July 21, 2012.

Chapter 5

Internet Data Collection, Privacy Policy & Industry Self-Regulation

This chapter switches gears to examine public policy, focusing on issues of internet data collection, disclosure, and consent, which were framed as matters of online privacy in the late 1990s. Media systems are structured by government laws, regulations, and subsidies, behind which are various policy-making processes.[1] In assessing the implications of media policies, it is important to consider not only those that have been enacted, but also those that have been proposed and ultimately rejected. In addition to the creation of favorable tax codes and establishment of a legal basis for online transactions and signatures, the commercialization of the internet and the development of online advertising in particular required that certain public interest efforts be thwarted, namely consumer protections in the form of online privacy laws. This chapter chronicles the defeat of meaningful privacy policy measures by private sector coalitions and explains how federal support for advertising industry "self-regulation" was maintained on the internet despite growing public concern over commercial data collection practices. Public interest activism is a big part of this history as privacy issues were one of the few entry points for organized civic intervention into online advertising's development and indeed, commercial internet development at large.

The flashpoint of this conflict was a controversy surrounding DoubleClick's acquisition of the marketing database company Abacus Direct in 1999. At issue was whether the merged entities would combine anonymous online profile data with personally identifiable information obtained from offline sources. DoubleClick sought to merge its web-based profiles with Abacus' consumer purchasing records that contained names, addresses, and other personally identifying

[1] Robert W. McChesney, *The Problem of the Media: U.S. Communication Politics in the Twenty-first Century* (New York: Monthly Review Press, 2004).

information. A number of privacy advocacy groups organized in opposition and applied significant pressure on legislators and the Federal Trade Commission (FTC) to halt the merger. However, this "focusing event" was merely the highest profile incident in an extended confrontation regarding what privacy advocates saw as an extended pattern of privacy violation perpetrated by the online advertising industry.

The stakes were high for the marketing complex. Privacy issues resonated with the public and crosscut political party lines. At the height of the skirmish, Congress considering adopting "opt-in" legislation mandating that companies obtain prior consent from web users regarding data collection practices. This threatened to undermine the developing surveillance infrastructure business model that relied on pervasive surveillance as a default practice of internet use. Facing negative publicity, pending legislation, and regulatory scrutiny, a broad coalition of marketing trade associations and newly formed online ad industry groups fought to maintain the status quo of advertising self-regulation by exerting their influence over a policy-making system unfit to withstand concentrated commercial power.

Privacy advocates achieved some successes, including stewarding the passage of the Children's Online Privacy Protection Act (COPPA) in 1998, pressuring DoubleClick to halt its plans for merging anonymous and personally identifiable profile information, and laboriously convincing the FTC to switch its stance from supporting industry self-regulation to recommending privacy legislation to Congress in 2000. Yet despite these public interest victories, industry won the war. While COPPA's passage was a significant achievement, its protections were limited. The DoubleClick/Abacus merger was completed as intended, greatly expanding the company's market power and profiling capacities. Most importantly, Congress did not act upon the FTC's recommendation for broader online privacy legislation of any kind.

Flouting widespread public concern, a deeply flawed regime of industry self-regulation prevailed and remains the standard today. These political struggles stand among "the most historic events on the [United States] privacy timeline."[2] The policy regime that was enacted established a framework for data collection and consumer privacy on the internet at the start of the 21st century. It enabled commercial entities to freely conduct pervasive and surreptitious consumer surveillance in the absence of any governmental authority to enforce basic codes of conduct or provide mechanisms for redress. This chapter examines these events in detail and assesses the outcomes.

Internet Policy in Context

Online privacy lies at the intersection of two broader regulatory and legislative contexts: the fairly well delimited general policy framework that governs telecommunications, media, and advertising and the more nebulous set of policies that address privacy in various contexts. Unlike many other "developed countries," the US has no federal agency devoted to implementing privacy policy. Instead privacy policy is enacted through an "incomplete patchwork of federal and state provisions that are inadequately enforced."[3] Apart from the Fourth Amendment's restrictions on illegal search and seizure, the foundational privacy legislation is the Privacy Act of 1974, which requires federal agencies to apply a set of "fair information principles" to operations that involve the collection and use of personally identifiable information about individuals. Beyond these general guidelines, a range of privacy laws and regulations pertain to the uses of certain categories of information (e.g. educational and medical records), while

[2] Federal Trade Commission, *Public Workshop on Consumer Information Privacy, Session Four: Database Study*, Testimony of Marc Rotenberg, June 13, 1997, 237-9.
[3] Kathryn Montgomery, *Generation Digital: Politics, Commerce, and Childhood in the Age of the Internet* (Cambridge: MIT Press, 2007), 77-78.

leaving out others (e.g. behavioral profiling data).[4] As Colin Bennett argues, the general approach to privacy policy-making in the US is "reactive rather than anticipatory, incremental rather than comprehensive, and fragmented rather than coherent. There may be a lot of laws, but there is not much protection."[5]

Since the 1970s, telecommunications and media policy have followed a strong trajectory of what has been called "neo-liberalism," whereby the US has led a sustained effort to open domestic and international markets to "free trade" and foreign investment and to privatize public telecommunications and media services.[6] Implementation of neoliberal policy has often taken the form of so-called "deregulation," which involves dismantling public interest protections in order to allow for "market-led" development. The power of the marketing complex to influence public policy has been a foundational element of the US commercial media system since the early decades of the 20th century.[7] Wielding this power in the political system through lobbying, public relations, and litigation is, as they say, as American as apple pie and baseball, and the media and telecommunications sectors have long been among the nation's most powerful private lobbies.[8] Over the last 80 years or so, the marketing complex "became part of the power structure in Washington politics, armed with a full arsenal of political weapons designed to deflect, disarm,

[4] David Jeffrey Alan Todd, "Politicizing Privacy: 'Focussing events' and the dynamics of conflict," (master's thesis, University of Victoria, 2001), 88.
[5] Colin Bennett, "Convergence revisited: Toward a global policy for the protection of personal data," in *Technology and Privacy: The New Landscape,* ed. Philip E. Agre and Marc Rotenberg (Cambridge: MIT Press, 1997), 113.
[6] Dan Schiller, *Digital Capitalism: Networking the Global Market System* (Cambridge: MIT Press, 1999); Robert W. McChesney, *Rich Media, Poor Democracy: Communication Politics in Dubious Times* (New York: New Press, 2000); Robert McChesney & Dan Schiller, "The political economy of international communications: Foundations for the emerging global debate about media ownership and regulation," *UNRISD Technology, Business and Society Programme,* no. 11 (2003).
[7] Daniel Pope, *The Making of Modern Advertising* (New York: Basic Books, 1983), 155.
[8] McChesney, *Rich Media, Poor Democracy.*

and undermine outside criticism."[9] And "like other powerful interests, the lobby enjoyed easy access to regulatory agencies, Congress, and the White House."[10]

The neoliberal trajectory within telecommunications and media policy is the antecedent to the zeitgeist of free market liberalism that permeated internet policy-making (among other areas) in the 1990s. As Karen Gustafson argues, during this period "dominant conceptualizations of the government and its proper regulatory role shifted substantially" while the public interest was "increasingly defined in terms of consumer opportunities, technological innovation, and national economic strength."[11] The booming financial markets were deployed to legitimize free market liberalism as a guiding policy principle, while the risk of undermining economic growth was commonly invoked as an argument against any regulation whatsoever of the internet. Undergirding this rationale was a technological utopianism, the sense that the internet inherently resists control, creates market efficiencies, and promotes democracy. As Robert McChesney points out, these mythologies are enticing because they hold certain elements of truth, but the larger consideration is that such discourses ideologically serve the dominant interests in society by dissuading public intervention and favoring the status quo.[12] This is the context in which privacy advocates mounted a challenge to the emerging regime of consumer surveillance on the internet. Given the historical evolution and inertia of media policy-making, they had their work cut out for them.

The dotcom era is rife with examples of neoliberal internet policy from the Telecommunications Act of 1996 to the Internet Tax Freedom Act of 1998 to President Clinton's

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[9] Montgomery, *Generation Digital,* 69.
[10] Montgomery, *Generation Digital,* 69.
[11] Karen E. Gustafson, "Deregulation and the market in public discourse: The AT&T Divestiture, the 1996 Telecommunications Act, and the development of a commercial internet," (doctoral dissertation, University of Texas at Austin, 2006), v, vi.
[12] McChesney, *Rich Media, Poor Democracy.*

Framework for Global Electronic Commerce. Released in 1997, the *Framework* was a landmark articulation of U.S. policy concerning the commercialization of the internet. Covering a wide range of issues, the *Framework* laid out a stringent market-led path for internet development that became a standard guideline for government and industry internet relations in the U.S. and among many of its trading partners. Within the broad scope of this document, the Clinton administration explicitly laid out a non-interventionist stance relating to online advertising and privacy issues, which set the stage for subsequent policy debates discussed herein. My ongoing archival research reveals that the policy positions advanced in *Framework* were the outcome of sustained collaboration with a core group of private sector interests including representatives of the advertising and direct marketing industries.[13]

In the advertising sector, market-led policy development has gone hand in hand with so-called industry "self-regulation," whereby business organizations such as the Advertising Self-Regulatory Council (formerly the National Advertising Review Council) set their own standards of conduct and enforcement mechanisms independently of government. Critical scholars have argued that terms such as deregulation and self-regulation are euphemistic, often resulting not in the erasure of public policy, but rather its reconfiguration to better serve commercial interests. As Inger Stole and Molly Niesen have each demonstrated, marketers and the advertising industry have been particularly effective in shaping advertising policy to favor self-regulation, defeating consumer movements that sought greater government protection against commercial abuse.[14] The conflict over online privacy and data collection was in many ways a continuation and recapitulation of these prior struggles.

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[13] Matthew Crain, "Framing Internet Policy in the Clinton White House," Manuscript in preparation.
[14] Inger L. Stole, *Advertising on Trial: Consumer Activism and Corporate Public Relations*, (Urbana IL: University of Illinois Press, 2006); Molly Niesen, "The Little Old Lady Has Teeth: The U.S. Federal Trade Commission and the Advertising Industry, 1970–1973," *Advertising & Society Review,* 12, no. 4 (2012).

It is useful to briefly outline the major actors before exploring the privacy narrative in detail. The field can be carved into three blocs: institutions of government, coalitions of companies from the marketing complex, and a network of privacy advocacy groups. Although there were points of internal dispute and competition within each of these groups, the marketers and the advocates consistently lined up opposite of each other regarding substantive online privacy issues. While individual states were active regarding online privacy issues, the present focus is upon national policy, specifically mediated through the institutions of the Federal Trade Commission, Congress, and the White House. The FTC has historically been the main policy arena for advertising regulation and was the most important agency involved in dotcom era privacy policy.[15] Congress became involved in the latter part of the debate and played a crucial role as a legislative body. The White House was a secondary but consequential actor in that its support for self-regulation through the *Framework for Global Economic Commerce* and its concurrent negotiations with the European Union over trade agreements involving data protection/disclosure in many ways delimited the canvas for domestic privacy deliberations.

A variety of overlapping collations of marketers, web publishers, and ad services providers were formed during this period to shape internet privacy policy. Two of the largest and most consequential were created expressly to promote advertising industry self-regulation and defeat proposed operational guidelines: the Online Privacy Alliance (OPA) and Network Advertising Initiative (NAI).[16] Representing major companies from a broad spectrum of business sectors, these groups sought to "instill more confidence in private sector leadership on privacy

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[15] Niesen, "The Little Old Lady Has Teeth."

[16] Other marketing coalitions included: NetCoalition.com, Advertising Standards Alliance (ASA), Privacy Partnership, and the Coalition for Advertising-Supported Information & Entertainment (CASIE), whose mission was nothing less than the construction of "environment where advertising revenue is the key funding source for the large majority of information and entertainment sources in the evolving world of media." "New media summit called: Artzt's challenge galvanizes top ad groups," *Advertising Age*, September 26, 1994.

issues and head off government regulation."[17] The OPA and NAI were comprised not only of individual businesses, but also of trade groups such as the Interactive Advertising Bureau (IAB), which bills itself as the "the first organization devoted exclusively to maximizing the use and effectiveness of internet advertising."[18] While the IAB was formed to set industry standards for ad buying processes, audience measurement, and to tabulate overall ad spending, it soon adapted its mission to include public policy, marking as the first of its six core objectives to "fend off adverse legislation and regulation."[19] The Direct Marketing Association (DMA), which at the time represented some 3,600 companies, was also highly active on privacy issues.[20]

I employ Bennett's notion of privacy advocacy networks to describe the community of largely non-profit civil society groups that organized to "challenge the development of the increasingly intrusive ways by which personal information [was] captured and processed" on the internet medium.[21] Here civil society refers to the social field that is outside the direct control of both the state and private sector. Among the most important organizations within this network were the Electronic Privacy Information Center (EPIC), Center for Media Education (CME), and Center for Democracy and Technology (CDT). EPIC and CDT were each established in 1994 to "focus public attention on emerging civil liberties issues and to protect privacy, the First

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[17] Leslie David Simon, *NetPolicy.Com: Public Agenda for a Digital World* (Washington, D.C.: Woodrow Wilson Center Press, 2000), 141-2.

[18] "Voluntary guidelines for banner advertising and process for exploring future internet advertising forms announced by industry groups," Internet Advertising Bureau, December 10, 1996, http://www.iab.net/about_the_iab/recent_press_releases/press_release_archive/press_release/4219

[19] Internet Advertising Bureau, "About the IAB," http://www.iab.net/about_the_iab

[20] Federal Trade Commission, *Public Workshop on Consumer Information Privacy, Session Two: Consumer Online Privacy*, Testimony of David Medine, June 11, 1997, 86. Other active trade associations were: Council of Better Business Bureaus' National Advertising Review Council (NARC) and its many divisions, Association of National Advertisers (ANA), American Advertising Federation (AAF), American Marketing Association (AMA), Interactive Services Association (ISA), and International Chamber of Commerce (ICC).

[21] Colin Bennett, *The Privacy Advocates: Resisting the Spread of Surveillance* (Cambridge: MIT Press, 2008), ix. Bennett addresses a much wider scope of privacy advocates, including those not based in the US and those concerned with forms of surveillance not primarily related to the internet.

Amendment, and constitutional values" in the area of communications technologies.[22] More liberal and less libertarian, CME's mission was "improving the quality of electronic media, especially on the behalf of children and families."[23] Other important groups were the Electronic Frontier Foundation, JunkBusters, Privacy International, Privacy Rights Clearinghouse, and the editors of two newsletters, Evan Hendricks of *Privacy Times* and Alan F. Westin of *Privacy and American Business.*[24]

Examining the various motivations and rationales behind the policy engagement of these groups is beyond the scope of this study.[25] The present focus is primarily on their collective actions to confront what they perceived as corporate over-reaching regarding online data collection for marketing purposes. Nowhere was this over-reaching more strident than in the case of DoubleClick's merger with Abacus in 1999; however, the merger represented the peak of a more protracted confrontation with the online advertising industry that began in the mid-1990s.

Politicizing Online Data Collection and Privacy

While data collection began to be addressed in public policy in the late 1960s and 70s as a result of growing government and corporate capacity for surveillance, it did not become a broad issue of political salience until the 1990s.[26] Prior to the popularization of the internet and the world wide web, there was some recognition among elites of potential privacy implications regarding the Clinton administration's plan to create a National Information Infrastructure (NII). As early as 1993, the White House identified privacy as a goal of the NII and the issue was nominally on

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[22] Electronic Privacy Information Center, "About EPIC," archive captured November 4, 1996, http://web.archive.org/web/19961104042450/http://epic.org/; Center for Democracy and Technology, "About CDT," archive captured October 22, 1996, http://web.archive.org/web/19961023234853/http://www.cdt.org/

[23] Center for Media Education, archive captured May 8, 1999, http://web.archive.org/web/19990223194220/http://tap.epn.org/cme/

[24] In addition, the privacy advocacy network collaborated on an ad hoc campaign basis with a handful of advocacy groups that were not explicitly focused on privacy or media, including the Consumer Federation of America (CFA), US Public Interest Research Group (US PIRG), and the National Parent Teacher Association (PTA).

[25] See Bennett, *The Privacy Advocates.*

[26] Todd, "Politicizing Privacy."

the agenda of the Telecommunications Policy Roundtable, a coalition of public interest groups concerned about telecommunications and interactive media.[27]

Worries relating to internet privacy protection were aired in 1994 when Representative Edward Markey, Chairman of the House Subcommittee on Telecommunications and Finance, publicly chastised the commercial online service provider America Online for selling lists of its subscribers to marketing information firms.[28] Earlier that year, Markey sponsored legislation that would have "required that companies amassing customer databases tell consumers that such information was being collected and allow them to prohibit their names and data from being sold."[29] In this early stage, some online service providers and web publishers bristled at the negative publicity and remained cautious about committing the resources needed to build and sell databases of their users. As shown in previous chapters, inhibitions among holdouts quickly vanished as more commercial online services, web publishers, and early ad networks such as DoubleClick began experimenting with forms of online consumer surveillance.

Media advocacy groups such as the Center for Media Education (CME) were well aware of the marketing complex's determination to influence the development of interactive media. The advertising trade press was abuzz about new media's potential for personalized "one-to-one" relationship marketing.[30] Searching for a point of intervention, the CME began a study of the website Kids.com in 1995. While basic corporate websites were becoming more common by that time, Kids.com was one of the first popular sites with the primary function of collecting

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[27] Department of Commerce, "The National Information Infrastructure: Agenda for Action [58 Fed. Reg. 49025-01]," September 21, 1993; Telecommunications Policy Roundtable, "New Coalition Unveils Public Interest Blueprint for America's 21st Century Telecommunications Highway," October 26, 1993, http://www.interesting-people.org/archives/interesting-people/199310/msg00096.html

[28] Steven W. Colford and Scott Donaton, "Consumer privacy spotlight shines on AOL," *Advertising Age*, October 10, 1994.

[29] Colford and Donaton, "Consumer privacy spotlight." Still in office at the time of writing, Markey continues to advocate for these issues.

[30] Don Peppers and Martha Rogers, *The One to One Future: Building Relationships One Customer at a Time* (New York: Doubleday, 1993).

marketing data. As the name suggests, the site was geared towards children ages 4-15. For media advocates "children's issues were a good starting point," as they were "harder to argue against" and presented better opportunities to attract much needed funding.[31]

CME discovered that Kids.com hosted product offers, sweepstakes, and contests in the form of a digital playground of interactive entertainment and games. Access was dependent upon user registration that included a lengthy questionnaire designed to collect marketing data. Children were asked to give their names, gender identities, media preferences, even to divulge their "hopes and dreams" in order to populate profile databases that could be sold to marketers of cereal and soft drinks.[32] Upon these initial results CME broadened its study to include sites created by major children's marketers such as Disney, Kellogg, and Pepsi.

In March 1996 CME released its findings in a report titled *Web of Deception*. The document made strong accusations of prevalent "invasion of children's privacy through solicitation of personal information and tracking of online computer use and exploitation of vulnerable, young computer users through new unfair and deceptive forms of advertising."[33] It called for an immediate end to the collection of children's personal information and for clear separation between commercial messages and content directed to young audiences on the internet. The report generated exposure in major newspapers at a time when there was little public knowledge about online marketing in general, let alone that geared toward children. Much of the prior attention paid to children's internet use regarded issues of access to "indecent" content.[34] The CME report effectively placed online advertising and data collection practices on

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[31] Jeff Chester, interview with the author, December 14, 2012.
[32] Montgomery, *Generation Digital,* 68.
[33] Center for Media Education, "Web of Deception: Threats to Children from Online Marketing," March 1996.
[34] This concern resulted in the controversial Communications Decency Act of 1996 (Title V of the Telecommunications Act of 1996), the anti-indecency provisions of which were struck down by the Supreme Court in 1997.

the civic advocacy agenda. It also initiated a "public shaming" of the companies involved, marshaling enough negative publicity such that General Foods postponed the launch of its new website for children.[35]

Equally important, the CME's efforts turned some heads in Washington. The group deftly briefed the Federal Trade Commission prior to the report's release and shortly thereafter filed a formal complaint against Kids.com alleging deceptive advertising practices.[36] Though the agency had limited authority to regulate online marketing in any broad sense, it was empowered to act on individual complaints about deceptive and fraudulent advertising practices and it began an investigation of Kids.com. As the report was making headlines, a concurrent story broke in the press regarding the use of HTML cookies as online tracking devices. The *San Jose Mercury News* was among the first to run the story under the headline "Leading Web Browsers May Violate Privacy of Users' Computers, Activities."[37] A media narrative centering on internet privacy was beginning to take shape.

While the *Web of Deception* report framed the issue of in terms of surreptitious data collection, deceptive marketing practices, exploitation of children, and privacy violations, the media tended to highlight only the technology and privacy elements of the story. In this way, the issue began to be defined as primarily about threats to privacy, rather than data collection more broadly. Nevertheless, coverage by major media outlets provided an important publicity boost to advocates who were beginning to build more coherent networks around these issues. They tapped into the ongoing mobilization of activists in opposition to the Telecommunications Act of

[35] Montgomery, *Generation Digital,* 76.
[36] Montgomery, *Generation Digital,* 76.
[37] Lee Gomes, "Leading Web Browsers May Violate Privacy of Users' Computers, Activities," *San Jose Mercury News*, February 13, 1996.

1996, but this parallel campaign also thinned their resources.[38] As they organized, advocates embraced the privacy frame as well, as it helped to broaden their coalition by bringing in groups like EPIC and was seen to have wider public appeal.

Meanwhile, the Clinton administration was negotiating with the European Union over the harmonization of international data transfer privacy protections and data collection standards. The EU's recently enacted "Directive on the Protection of Personal Data and on the Free Movement of Such Data" contained strong privacy guidelines for EU member states that disallowed "data transfer" with countries that failed to provide an "adequate level of protection."[39] Set to take effect in October 1998, the EU Directive posed a hazard to US transnational corporations and to the administration's strident "hands-off" approach to internet regulation. Specifically, it threatened to impede the estimated $120 billion "personal information" market between the US and EU that operated according to laissez faire principles.[40] To deal with this problem, Clinton employed the Department of Commerce and the FTC to more or less steward the development of industry self-regulation regarding online privacy in order to appease the concerns of EU policy-makers over US data practices.[41]

This confluence of events forced a reluctant FTC to place online privacy at the center of its regulatory agenda, where it would remain for the next four years. The agency's Bureau of Consumer Protection had actually begun a "Consumer Privacy Initiative" in 1995, but it was not until mid-1996 that it began to address online privacy in a sustained way. In June the FTC

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[38] Chester, interview.
[39] Simon, *NetPolicy.Com,* 143; Montgomery, *Generation Digital,* 78-9.
[40] Robert R. Schriver, "You Cheated, You Lied: The Safe Harbor Agreement and its Enforcement by the Federal Trade Commission," *Fordham Law Review*, 70, no. 6 (2002), 2279.
[41] Ira Magaziner (former Senior Advisor for Policy Development for President William J. Clinton), interview with the author, February 22, 2013. While the FTC is an independent agency, it serves within the Executive branch (commissioners are appointed by the President) and at the behest of Congress, which assigns regulatory duties and controls funding. Power is exercised through these structural connections. J. Thomas Rosch, "Thoughts on the FTC's Relationship (Constitutional and Otherwise) to the Legislative, Executive, and Judicial Branches," Remarks before the Berlin Forum for EU-US Legal-Economic Affairs, September 19, 2009.

convened the first of what became a string of hearings about online privacy issues. A Public Workshop on Consumer Privacy on the Global Information Infrastructure invited testimony and discussion from a mix of private companies and coalitions from the marketing complex, advocacy groups, and government. Through the Workshop, the FTC adopted what Kathryn Montgomery calls a "softball approach to prodding the industry" to take online privacy matters into its own hands.[42] FTC Chairman Robert Pitofsky reportedly opened the proceedings by assuring participants (and no doubt the White House) that the commission was "not here to lay the groundwork for any government rules, guidelines, or otherwise."[43]

Participants representing the marketing complex included CASIE, ANA, AAAA, DMA, Netscape, and the online service provider Prodigy, while CME, EPIC, Privacy Times, and CDT represented privacy advocates. A range of alternatives to regulation were discussed, including technology-based solutions, consumer and business education, and industry self-regulation. As summarized in an FTC staff report:

> Industry representatives and trade associations took the position that it would be both inappropriate and counterproductive to mandate particular privacy protections. According to these participants, regulation would stifle the creativity and innovation that have marked the development of interactive media to date, could infringe important First Amendment rights, and might force marketers off the internet entirely. Government should step back, it was argued, and permit industry to develop privacy protection models. Privacy advocates argued that the technologies demonstrated during the

[42] Montgomery, *Generation Digital,* 79.
[43] Montgomery, *Generation Digital,* 80.

Workshop are not a substitute for an enforceable code of fair information practices, and that they are not likely to flourish without government enforcement of privacy rights.[44] The FTC determined that the marketing complex needed additional time to implement a self-regulatory framework and recommended convening a follow-up workshop.

Prior to the CME report and FTC gathering, the marketing complex had shown little concern for online privacy issues.[45] What scant recognition had occurred was largely empty rhetoric. In February 1996 CASIE formulated a general list of "goals for protecting consumer privacy in interactive media," but included no plans for implementation.[46] At the time the internet was still an untested advertising medium with a small, but rapidly growing user base. Marketers were largely ambivalent about its future, although many had committed resources to building corporate home pages, including those profiled in the CME's *Web of Deception* report. Reacting to the report, *Advertising Age* called the proposed limits on children's marketing "a chilly prospect for responsible marketers who value the ability to innovate and experiment in this medium, free of detailed do's and don'ts," and warned that such restrictions would "stifle promising experiments."[47] Arguments of this nature became a mantra for the marketing complex as it slowly began to awaken to the need to extend the regime of self-regulation to online media.

After the FTC workshop, the trade press began to address the issue more forcefully. In a single issue at the end of 1996, *Advertising Age* published no less than six articles celebrating the 25th anniversary of the "organized self-regulation of national advertising" and linking its history to present concerns. The publication called for efforts to ensure that self-regulation would remain

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[44] Federal Trade Commission, "Staff Report: Public Workshop on Consumer Privacy on the Global Information Infrastructure," June 1996 (report released in December 1996), 27-8.
[45] Montgomery, *Generation Digital,* 83
[46] "Bulletin board: CASIE lists goals for interactive privacy," *Advertising Age*, February 12, 1996.
[47] "Help Hold Off Online Rules," *Advertising Age*, April 8, 1996.

standard practice on the internet.[48] "Twenty-five years ago, self-regulation rescued advertising from a credibility crisis. It can do the same for the new controversies facing the industry today if the industry displays the courage and foresight it did in 1971," declared one editorial.[49] "Self-regulation is a success story in which businessmen, by accepting responsibility for their actions, have gotten the government off their backs," stated another.[50] Although *Advertising Age* was sounding the alarm (no doubt in part to drum up controversial headlines on its own behalf), industry had few reasons to perceive government regulation as a credible threat. Indeed, one of the editorials mentioned above included a quote from FTC Chairman Pitofsky regarding his opinion of advertising self-regulation: "I've often said it's the best and most reliable industry self-regulation program I'm aware of. From my point of view it was well conceived in the first place and is a first-class operation today."[51]

In June 1997 the FTC held a series of follow-up hearings where privacy advocates and marketing complex representatives faced off once again over children's advertising and internet privacy more generally. "Last year we examined the issues and the industry said, 'Let us take a crack at self-regulation.' Now, one year later, we are examining whether they were able to create self-regulatory or technological tools to protect consumers' privacy," said FTC Commissioner Christine Varney.[52] This time around industry took the issue more seriously, but only marginally

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[48] John McDonough, "A commemorative: 25 years of self-regulation," *Advertising Age*, December 2, 1996. In this case, Advertising Age dated the origin of self-regulation to the formation of the National Advertising Review Council," a joint project of the American Advertising Federation (AAF), the American Association of Advertising Agencies (AAAA), the Association of National Advertisers (ANA), and the Council of Better Business Bureaus (CBBB). In 2012 the NARC was rebranded as the Advertising Self-Regulatory Council. The history of self-regulation is beyond the scope of this study. For an overview, see Angela J. Campbell, "Self-Regulation and the Media," *Federal Communications Law Journal*, 51, no. 3 (May 1999).
[49] "Winning with self-regulation," *Advertising Age*, December 2, 1996.
[50] Stanley E. Cohen, "Self-regulation: Accepting responsibility for their actions," *Advertising Age* December 2, 1996.
[51] McDonough, "A commemorative: 25 years of self-regulation."
[52] Ira Teinowitz, "Privacy groups ready to seek FTC regs for online biz," *Advertising Age* June 9, 1997.

so.[53] In cooperation with CASIE, the Children's Advertising Review Unit of the Council of Better Business Bureaus (CARU) developed guidelines regarding children's online marketing that involved obtaining parental consent and labeling advertising as such.[54] The Direct Marketing Association (DMA) spoke of a Privacy Action Campaign aimed at persuading marketers to create and adopt their own standards for protecting consumer privacy.[55] These non-binding and sparsely implemented programs were little more than public relations efforts aimed to preempt the mild threat of FTC regulation.

At the hearings various marketing complex coalitions including CARU, DMA, ISA, and an ad hoc group of database companies led by Lexis-Nexis and major credit information providers repeated the declaration that the rapid advancement of internet technologies eliminated any need for governmental action concerning online privacy.[56] Companies had economic incentives to build the trust and confidence of internet consumers, they argued. As DMA President H. Robert Wientzen argued, regulation threatened to "easily disrupt the development of a very useful tool for consumers, and, indeed, a useful tool for business, which is going to have a significant impact on the US and on global economies."[57]

Technology-based solutions were proposed as well, although most were in nascent stages of development. Microsoft, Netscape, and more than 60 other companies threw their support behind the creation of an Open Profiling Standard (OPS), a method for "users to give their consent before their personal information is handed off to a website."[58] OPS was part of a wider proposal by the World Wide Web Consortium (W3C) called the Platform for Privacy

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[53] Montgomery, *Generation Digital,* 84.
[54] Ira Teinowitz, "CARU to unveil guidelines for kid-focused web sites," *Advertising Age,* April 21, 1997.
[55] Ira Teinowitz, "DMA campaigns for privacy rules," *Advertising Age,* May 19, 1997.
[56] Ira Teinowitz, "Internet privacy concerns addressed," *Advertising Age,* June 16, 1997.
[57] Federal Trade Commission, *Public Workshop on Consumer Information Privacy, Session Two: Consumer Online Privacy*, Testimony of David Medine, June 11, 1997, 88.
[58] Gregory Dalton, "OPS: Answer to cookies?" *InformationWeek*, October 13, 1997.

Preferences (P3P), backed by a group of companies including AOL and IBM. The creator of the web, Tim Berners-Lee, himself showcased a prototype of how P3P might enable users to ensure that the websites they visit would fall within a range of chosen privacy practices. Among the supporters of P3P was the Clinton Administration, which, favoring extra-governmental solutions, installed an early version of the system on the White House website as a show of good faith.[59] The privacy seal program TRUSTe (formerly eTrust) was presented as well. Created as a partnership among the Electronic Frontier Foundation (EFF) and various private sector entities, TRUSTe was a certification program whereby participating sites would display "third-party" verified privacy seals that were meant to indicate their data collection practices. Such technological solutions were meant to provide web users with the tools to negotiate with web publishers and marketers over specific levels of data collection and privacy protection. As such they relied not only on active participation by the marketing complex, but were heavily dependent upon consumer awareness and labor. As Esther Dyson, chairman of the libertarian-leaning EFF and TRUSTe put it without a trace of irony: "we believe that the alternative to government regulation is not really [industry] self-regulation but it is customer regulation."[60]

Many within the marketing complex were enthusiastic about such technological fixes to the extent that they "might stave off government regulation," though some prickled at the impracticality of such measures, arguing that consumers should simply accept data collection in exchange for content that was personalized and free of charge.[61] "Most of the millions of Americans that flocked to the web in recent years know and accept a big dose of commercialism

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[59] David P. Baron, "DoubleClick and Internet Privacy [Stanford Graduate School of Business Case no. P-32]," August, 2000, 8.
[60] Federal Trade Commission, *Public Workshop on Consumer Information Privacy, Session Two: Consumer Online Privacy*, Testimony of Esther Dyson, June 11, 1997, 106.
[61] Ira Teinowitz, "Net privacy debate spurs self-regulation," *Advertising Age,* June 9, 1997; Debra Aho Williamson, "Neteffect: Privacy and ad revenue issues impede growth," *Advertising Age,* June 16, 1997.

in their media," huffed *Advertising Age*.[62] Law scholar Janlori Goldman of the CDT countered that privacy should be treated as a basic right and that internet participation should not hinge upon "trading your privacy for some kind of benefit."[63] Along these lines, EPIC's Marc Rotenberg referred to P3P as "pretty poor privacy," criticizing it as a technology meant not to protect privacy, but "to enable the disclosure of personal information."[64]

More generally, privacy advocates critiqued industry proposals as insufficient and contended that self-regulation lacked the necessary enforcement mechanisms to ensure meaningful privacy protection. They also criticized the lack of transparency in data collection practices, arguing that "average consumers did not know their activity was being tracked let alone how the information was being used."[65] They claimed that consumers should be granted access to information collected about them and have some measure of control over it, including the right to "opt-out" of data collection entirely.[66] EPIC in particular argued that consumers should have the option to retain total anonymity online while preserving the freedom to do what they wish, including engaging in business transactions.[67]

Shortly after this second hearing the FTC issued a ruling in support of CME's complaint against Kids.com. The agency found that the site's data-collection practices violated rules on deceptive advertising, but did not pursue punitive action as the company had agreed to provide better notice of its activities through a privacy policy declaration. Montgomery argued that this still represented a victory for privacy advocates because it laid out a framework for how sites should handle children's data collection in the future, i.e. posting privacy policies and obtaining

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[62] "The new FCC," *Advertising Age*, June 23, 1997.
[63] Federal Trade Commission, *Public Workshop on Consumer Information Privacy, Session Two: Consumer Online Privacy*, Testimony of Janlori Goldman, June 11, 1997, 335.
[64] Baron, "DoubleClick and Internet Privacy," 7.
[65] Baron, "DoubleClick and Internet Privacy," 5.
[66] Federal Trade Commission, *Public Workshop on Consumer Information Privacy, Session Two: Consumer Online Privacy*, Testimony of Evan Hendricks, June 11, 1997, 325.
[67] Teinowitz, "Privacy groups."

parental permission before releasing information to third parties.[68] However, despite the finding of wrongdoing on behalf of Kids.com and the general disarray of industry self-regulation efforts, FTC Chairman Pitofsky announced that the agency would yet again refrain from pursuing any regulatory actions and instead "give new industry initiatives more time to take effect."[69] The announcement coincided with the Clinton administration's release of its *Framework for Global Electronic Commerce*, which strongly articulated that the "private sector should lead" internet development – a process that was steadily underway by 1997.

By the end of that year it was increasingly clear that industry was not implementing meaningful self-regulation, even at the basic level of providing notice of data collection practices via privacy policies. In November, a survey by TRUSTe found that 80 of the 100 most popular websites had not yet posted a privacy policy of any kind.[70] Around this time journalists revealed a plan by AOL to match its subscribers' online information with offline records purchased from direct marketing companies such as Polk and MetroMail.[71] The goal was to create better profiles for targeted advertising. Consent to these practices was buried deep within AOL's terms of service agreement, but not explicitly articulated in any privacy policy. Susan Scott, executive director of TRUSTe called the move "a gross violation of privacy," explaining that consumers gave AOL their credit card numbers and addresses for billing purposes, not to be matched with marketing profiles sold by marketing database companies.[72]

Still, government regulation did not appear to be a genuine threat to certain thought-leaders within the marketing complex. While stressing the importance of self-regulation, on the whole *Advertising Age* remained highly dismissive of the concerns of so-called "privacy

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[68] Montgomery, *Generation Digital,* 90.
[69] Teinowitz, "Privacy groups."
[70] "Bulletin Board," *Advertising Age*, November 3, 1997.
[71] Patricia Riedman, "AOL taps offline databases in ad targeting quest," *Advertising Age*, October 20, 1997.
[72] Riedman, "AOL taps offline databases."

freak[s]": "What does it matter that my local Jewel grocery store knows I buy three bagels every week: two plain and one cinnamon-raisin? Or that the DoubleClick ad network knows how many times I've seen an ad on one of the sites they rep? … When it comes to private data, most consumers either won't know what's going on, or won't care."[73]

At the same time, public anxiety over privacy issues was becoming increasingly difficult to ignore, especially concerning children. One survey showed that a majority of online consumers attempted to "steer away from data gathering sites," were "worr[ied] about child exploitation," and did not believe that new technologies would solve such problems.[74] Another found that 80 percent of consumers believed that policies or legislation would be necessary to protect internet privacy.[75] Ira Magaziner, President Clinton's top policy advisor on electronic commerce issues and one of the principle negotiators with the EU regarding data collection, began to publicly support children's online privacy legislation in late 1997.[76] Considering the White House's support for private sector led internet development, this was somewhat of an about face, which some observers saw as an attempt to provoke industry action toward more concrete self-regulation. However, Magaziner had been in contact with CME regarding children's privacy since at least 1996 and said in an interview that the administration had intended to support legislation in this area from the beginning.[77] These details notwithstanding, explicit support from the administration marked a milestone in advocates' quest for privacy regulation.

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[73] Williamson, "Neteffect: Privacy and ad revenue issues."
[74] Steve Alexander, "Web marketing gets personal," *InfoWorld*, January 12, 1998.
[75] Alexander, "Web marketing gets personal."
[76] Montgomery, *Generation Digital,* 90-1.
[77] Montgomery, *Generation Digital,* 90-1; Magaziner, interview; Magaziner papers.

The Children's Online Privacy Protection Act

As the web became more of a mainstream advertising platform, the stakes regarding privacy policy were raised. The number of internet users was rapidly expanding, as was the dotcom bubble. Flush with finance capital, ad services providers like DoubleClick and CMGI were creating more advanced and more expansive forms of consumer surveillance. Under lobby by privacy advocates, the FTC launched a detailed survey of web privacy practices and industry self-regulation efforts early in 1998. The plan was to assess industry's progress since the 1997 workshops in order to make recommendations to Congress by the summer. It was the Commission's first hint that it would consider advocating for legislation. As EPIC's Marc Rotenberg told the press: It was "time to move beyond public relations and get on with the hard work of privacy protection."[78]

There was a renewed sense of urgency within the marketing complex and a growing realization that regulation was no longer an empty threat. "It's a massive mistake to ignore Washington," warned one marketing consultant.[79] "The industry is maturing, and we have to act like grown-ups."[80] Trade associations and individual companies formed new ad hoc groups to coordinate self-regulatory efforts and lobby government officials. The most prominent of the newly formed coalitions was the Online Privacy Alliance (OPA), a broad collective of over 85 companies whose core mission was to advance self-regulation for the internet advertising sector. The OPA was comprised of industry leaders from all components of the marketing complex (e.g. Disney, Procter & Gamble, the DMA, and DoubleClick) as well as ancillary sectors such as information technology and computing (e.g. Intel and Apple) and telecommunications (e.g.

[78] Montgomery, *Generation Digital,* 96.
[79] Judith Messina, "Companies idling as beltway maps plans for I-Way," *Crain's New York Business,* March 9, 1998.
[80] Messina, "Companies idling as beltway maps plans."

AT&T).[81] In addition to mustering a multi-faceted lobbying campaign (outlined below), the OPA created privacy policy templates for member companies to modify to suit their needs. In related efforts, the Better Business Bureau announced its own privacy certification program called BBB Online and the DMA instituted a rule barring membership to marketers that did not have a privacy policy in place by July 1999.[82]

Some of the largest companies involved with online data collection began to post individual privacy polices during this period. DoubleClick and others even moved to create "opt-out" mechanisms, whereby consumers could choose to withdraw from surveillance and ad targeting. Although these were significant steps, the implementations were seriously flawed (as will be addressed in detail below). For now it suffices to note that privacy policies were often written in vague and inaccessible language and opt-out mechanisms were partial at best. Beyond this there was no cohesiveness or accountability among privacy protection efforts across the various components of the marketing complex, while some major marketing collations still remained nonchalant about privacy matters. In August 1998 Proctor & Gamble organized a

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[81] OPA member companies and associations included: 3Com, Acxiom, AdForce, America Online, Inc., American Advertising Federation, American Electronics Association, American Institute of Certified Public Accountants, Ameritech, Apple Computer, Association of Online Professionals, AT&T, Bank of America, Bell Atlantic, Bell South, Business Software Alliance, CASIE (CASIE is representing Association of National Advertisers & American Association of Advertising Agencies), Centraal Corporation, Cisco, CommTouch Software, Compaq, Computer Systems Policy Project (CSPP), Council of Growing Companies, Dell, Direct Marketing Association, Disney, DoubleClick Inc., Dun & Bradstreet, Eastman Kodak, Co., eBay Inc., EDS, EDventure Holdings, Inc., E-LOAN, Engage Technologies Inc., Equifax, Ernst and Young, European-American Business Council, Experian, Fast Forward/IAB, Ford, Gateway, GeoCities, Hewlett-Packard, IBM, Individual Reference Services Group, Information Technology Association of America, Information Technology Industry Council, INSUREtrust.com LLC, InsWeb Corporation, Intel Corp, Interactive Digital Software Association, Interactive Travel Services Association (ITSA), Internet Alliance, Intuit, KPMG, LEXIS-NEXIS, MatchLogic, MCI WorldCom, Microsoft, MindSpring Enterprises Inc., Motion Picture Association of America, National Foundation for Consumer Credit, NCR, Nestle' USA, Netscape, NORTEL, northpole.com. LLC, Novell, Oracle, Preview Travel, PricewaterhouseCoopers, PrivaSeek, Inc., Procter & Gamble, Rights Exchange, Inc., Software & Information Industry Association, Sun Microsystems, The United States Chamber of Commerce, The United States Council for International Business, Time Warner Inc., Unilever United States, Inc., Viacom, ViewCall Canada, Inc., Virtual Vineyards, WebConnect, Women.com Networks, Xerox, and Yahoo!. Online Privacy Alliance, "Online Privacy Alliance says web sweeps confirm significant progress in privacy self-regulation," May 12, 1999, http://www.privacyalliance.org/news/05121999.shtml

[82] Montgomery, *Generation Digital,* 92-3; Ira Teinowitz, "FTC chief asks congress to ensure privacy on web," *Advertising Age,* June 8, 1998.

gathering of marketers and ad agencies called the Future of Advertising Stakeholders Summit (FAST). The assembly was a reboot of CASIE, meant to catalyze the internet industry to address problems relating to audience measurement standards, consumer acceptance of ads, and online media buying.[83] Notably absent from the docket were efforts towards addressing issues of online data collection and privacy.

While industry began to organize, privacy advocates formed their own coalitions to lobby the FTC, White House, and the private sector itself. Anticipating that Congress would not fully commit to legislation absent the buy-in of at least some of the powerful corporations in the children's media sector, the CME reached out to EPIC, the CFA, and the National PTA in order to start behind-the-scenes negotiations with Disney, AOL, and other major companies to forge an agreement on a regulatory framework for children's online marketing.[84]

In June the FTC reported the findings of its study to Congress. Examination of over 1,400 websites showed that while the vast majority (85%) of sites collected consumer information, very few (14%) provided any notice whatsoever of such practices, and fewer still (2%) provided comprehensive privacy policies.[85] About half (56%) of sites directed to children disclosed their data collection practices, though less than 10% provided means for parental control over the collection and use of information from children. The study revealed that while industry leaders were making halting steps toward the most basic of privacy protections, the majority of the online advertising sector continued to operate without regard for public concerns. Chairmen Pitofsky called such efforts "disappointing" and warned that the Commission's patience in

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[83] "New Ad Group Formed at P&G's FAST Summit," *ClickZ*, August 21, 1998, http://www.clickz.com/clickz/news/1694663/new-ad-group-formed-p-gs-fast-summit

[84] Montgomery, *Generation Digital,* 93-4.

[85] Federal Trade Commission, *Privacy Online: A Report to Congress* (June 1998), ii-iii. Note that the FTC did not take issue with data collection practices per se, but with their secretive nature. Further, industry representatives countered that "in the most important parts of the web, very significant progress has been made in dealing with user privacy concerns. More than 70% of the high-volume sites, such as Yahoo and Lycos, actually do have privacy statements." Kim M. Bayne, "Privacy still burning web issue," *Advertising Age* June 29, 1998.

awaiting self-regulatory solutions was wearing thin.[86] In what became another milestone for privacy advocates, the FTC recommended that Congress pursue legislation that would facilitate parental control over the collection and use of children's personal information online.[87] On the heels of this recommendation, the popular online home page publisher GeoCities settled an earlier case brought by the FTC concerning deceptive privacy and data collection practices. Accused of "obtaining information from children under 13 without seeking proper parental approval and misrepresenting how personal information gathered from adults was being used," GeoCities agreed to implement a series of reforms including the deletion of all information gathered from children without parental consent.[88]

Responding to the FTC and increasing public concern, the 106th Congress began to look into issues pertaining to children's advertising and internet privacy more generally. The White House officially endorsed children's privacy legislation as well, and major companies in the sector decided to "cut their losses" and work to shape the law that was likely coming.[89] These developments enabled the bi-partisan passage of the Children's Online Privacy Protection Act (COPPA) in late 1998. The statute created basic standards for the collection and use of children's (defined as under age 13) data by website operators to be enforced by the FTC.[90] Despite COPPA's relative tameness, it was nonetheless criticized by the DMA and other industry groups for making it more difficult and expensive for advertisers to reach children.[91]

While the FTC had stepped up to advocate for children, data collection regarding adults remained a different matter. In what essentially amounted to yet another punt, the Commission

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[86] Teinowitz, "FTC chief asks congress."
[87] Federal Trade Commission, *Privacy Online: A Report to Congress* (June 1998), 42.
[88] Ira Teinowitz, "Geocities settles FTC privacy case," *Advertising Age,* August 17, 1998.
[89] Montgomery, *Generation Digital,* 98-99.
[90] Commercial site operators were required to 1) provide notice of info collection practices and uses; 2) obtain parental consent prior to collecting information on kids under 13 and 3) ensure data security.
[91] Teinowitz, "FTC chief asks congress."

refrained from making any substantive recommendations concerning online privacy more broadly, noting that it would "make recommendations on this subject this summer [of 1998]."[92] Summer passed and the FTC was silent, despite the claims of privacy advocates that industry self-regulation was an obvious failure. Though it refused to act, the FTC seemed to agree with this assessment, summarizing in 1998:

> The Commission has encouraged industry to address consumer concerns regarding online privacy through self-regulation. To date, however, the Commission has not seen an effective self-regulatory system emerge. As evidenced by the Commission's survey results, and despite the Commission's three-year privacy initiative supporting a self-regulatory response to consumers' privacy concerns, the vast majority of online businesses have yet to adopt even the most fundamental fair information practice[s].[93]

The FTC's hesitance seems to be traceable to the pressure applied by industry representatives and the White House to stall broad legislative or regulatory recommendations. The marketing complex argued that it was making significant progress and that more time was needed. Facing continuing negotiations regarding the EU data protection directive, the Clinton administration remained strongly in favor of industry-developed solutions. However, the White House increasingly threatened government intervention should self-regulation fail to materialize.[94] In this light, COPPA's passage seemed to be born in part of political expediency. As Montgomery notes, "By focusing on children the government was able to demonstrate that it was taking decisive action to protect online privacy, while also buying additional time for industry to get its act together."[95]

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[92] Federal Trade Commission, *Privacy Online: A Report to Congress* (June 1998), iii.
[93] Federal Trade Commission, *Privacy Online: A Report to Congress* (June 1998), 41.
[94] David Joachim, "Internet Privacy Laws: Hot Capitol Hill Topic," *InternetWeek*, June 29, 1998.
[95] Montgomery, *Generation Digital,* 95.

COPPA's passage did in fact spur increased action within the marketing complex to set self-regulatory standards regarding privacy issues. In 1998 and into 1999 the OPA and others achieved some success in standardizing the basic practice of posting privacy policies and disclosures among most major online websites. It helped that OPA members Microsoft and IBM, each among the net's largest marketers, announced they would no longer advertise on any site that failed to post a comprehensive privacy policy. Wary of Congressional action and public concern, these companies and other major marketers began to view a disregard for online privacy as "a top barrier to the continued growth of e-commerce."[96] Microsoft even developed a web-based "privacy wizard" tool to automate the writing of privacy policies for website administrators. Additionally, advertising infrastructure providers, heretofore relatively underrepresented in Washington, formed a trade association of their own: the Networking Advertising Initiative (NAI). Members included DoubleClick, NetGravity, 24/7 Media, CMGI's ADSmart and Engage, and others. The NAI's principal tasks were mapping out a self-regulatory framework for the online ad services industry and formalizing a more comprehensive opt-out mechanism for consumers.[97] Together with the OPA, the NAI became a fixture in Washington policy discussions during this period.

DoubleClick, Abacus, and Personally Identifiable Information

In the summer of 1999, a high profile controversy erupted over the proposed merger between DoubleClick and the marketing database company Abacus Direct. David Todd argues that this transaction became a "focusing event" that engendered a wide politicization of privacy issues that might have otherwise remained suppressed.[98] Of course, this was only the case because the merger occurred within the ongoing conflict among government, industry, and privacy advocates

[96] The Philadelphia Inquirer, "Microsoft wants net privacy," June 24, 1999.
[97] Beth Cox, "Profiling Firms Defend Themselves," *ClickZ,* November 10, 1999.
[98] Todd, "Politicizing Privacy," 49.

that had been building momentum since the CME released its *Web of Deception* report in early 1996. Nonetheless, the DoubleClick/Abacus merger was singularly important in that it represented the most sweeping attempt to date to link anonymous online profile information with personally identifiable information (PII) culled from everyday offline consumption practices. Stridently opposed to the move to attach names to online profiles, EPIC, CDT, and CME organized a coalition campaign to oppose the merger.[99] Such advocacy efforts prompted a formal FTC investigation into DoubleClick's data collection practices, brought a new level of publicity regarding online privacy issues to the general public and Congress, and clarified the limits of self-regulation, namely the lack of enforcement mechanisms to ensure that companies actually complied with their own self-imposed privacy standards.

At the time DoubleClick was the largest online advertising infrastructure company and was expanding rapidly via the financial engine of the dotcom bubble. When the Abacus merger was announced, DoubleClick had just recently acquired its biggest rival in the ad services sector, NetGravity. Its new target, Abacus, maintained a massive consumer purchasing database that contained information about some 90% of US households compiled from catalog records, magazine subscriptions, and retail transactions.[100] While DoubleClick's 120 million profiles were ostensibly anonymous, Abacus' 88 million profiles contained PII such as names and residential addresses. As the *Wall Street Journal* explained: "If you've bought anything from a large department store or a catalog lately, Abacus probably has your name and address, what you bought, and how much you spent."[101]

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[99] Courtney Macavinta, "Consumer Group to Fight DoubleClick Deal," *CNET*, June 14, 1999. http://news.cnet.com/2100-1017-227100.html&tag=mncol;txt

[100] *The Economist*, "The Internet's chastened child," November 9 2000, http://www.economist.com/node/420885

[101] Andrea Petersen and Jon G. Auerbach, "Online Ad Titans Bet Big in Race to Trace Consumers' Web Tracks," *Wall Street Journal*, November 8, 1999.

Beyond the sheer magnitude of the stockpile of consumer information that would result from the combination of these two companies, privacy advocates worried that DoubleClick's move to merge anonymous online data with identifiable offline data would become standard practice. In response, representatives from CME, EPIC, Junkbusters, Privacy Rights Clearinghouse, and the US Public Interest Research Group wrote an open letter to DoubleClick and Abacus executives, copying key members of Congress across party lines.[102] The letter charged that the merger would "fundamentally change the internet from an anonymous space to one where consumers are silently identified" and criticized DoubleClick's opt-out mechanism as meaningless absent more robust implementation and wider awareness of its availability.[103] They sent similar letters to the shareholders of both companies, encouraging them to disapprove of the merger.

DoubleClick replied indirectly through the trade press saying that not only was it against company policy to merge such information, but it was also technically impossible to achieve.[104] The anonymity of consumer profiles had long been a standard rhetorical shield used by online data gatherers to deflect privacy-related criticism. As DoubleClick CEO Kevin O'Connor liked to say, "We can't invade anyone's privacy because we don't know who you are."[105] Moreover, the company argued that "truly paranoid" web users could opt-out of its tracking program via its website.[106] Receiving no direct acknowledgement from either company, advocates sent a third

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[102] Todd, "Politicizing Privacy," 103-4. A copy of the letter could not be obtained, so I rely on Todd's quoting. The letter was copied to John McCain and Ernest Hollings of Senate Commerce Committee, John Ashcroft and Richard Bryan of Subcommittee on Consumer Affairs, Thomas Bliley and John Dingell of House Commerce committee, and Billy Tauzin and Ed Markey of Subcommittee on Telecommunications, Trade and Consumer Protection.
[103] Todd, "Politicizing Privacy," 103-4.
[104] Evan Hansen, "DoubleClick under email attack for consumer profiling plans," *CNET News,* February 2, 2000, http://news.cnet.com/DoubleClick-under-email-attack-for-consumer-profiling-plans/2100-1023_3-236376.html?tag=mncol; Jennifer Gilbert, "D'Click says merging Abacus data impossible," *Advertising Age,* November 15, 1999.
[105] Michael Schrage, "Kevin O'Connor," *Adweek*, January 18, 1999.
[106] Schrage, "Kevin O'Connor."

letter in November, this time addressed to managers of "socially responsible mutual funds."[107] They warned of the "harmful social effects of the imminent merger" and framed online advertising practices as "severely damaging the fundamental human right of privacy."[108] The letter concluded by asking fund managers to divest holdings of both companies, add them to screening lists of businesses that are to be avoided for disregarding human rights, and support shareholder activism towards these ends.

Despite these efforts, stock prices were rising for both companies leading up to the merger, which was successfully completed on November 23, 1999. The dotcom bubble was in a full-blown frenzy at this point, pricing the final deal at $1.8 billion and spiking DoubleClick's market value to some $8.8 billion.[109] Shortly after the new year DoubleClick quietly removed its pledge to keep consumer profiles anonymous from its privacy policy, obliquely revealing its plans to merge Abacus' databases with its own in order to build "consumer profiles that would include each user's name and address; retail, catalog and online purchase history; and demographic data."[110] Press reports indicated that DoubleClick began working to combine the data almost immediately after the merger, achieving what it previously described as technically "impossible" by creating a merged database with a test group of 100,000 profiles.[111] This was accomplished "through an alliance of undisclosed data-sharing sites" [called the Abacus Online

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[107] The financial tactics of privacy advocates are notable in light of this dissertation's focus on the importance of the dotcom bubble for online advertising's development. Although the particular campaign against DoubleClick was ineffective in achieving the immediate goal of blocking the merger, it further demonstrates the structural link between finance and online advertising during the period. It also demonstrates that these activists were tactical and flexible in choosing their campaigns. As one investment analyst noted, the use of "investment vehicles as an advocacy tool in relation to privacy [was] a relatively new phenomenon" and "a similar strategy led to a partial victory earlier this year against Intel, in which the giant chip manufacturer was forced by the same privacy advocates to ship the Pentium III processor with its user-identifying serial code feature turned off." Wendy Marinaccio, "Privacy advocates blast DoubleClick merger," *CNET News*, June 21, 1999, http://www.dmnews.com/privacy-groups-target-new-global-bulls-eye-wall-street/article/63538/

[108] Todd, "Politicizing Privacy," 111.

[109] Todd, "Politicizing Privacy," 112.

[110] Hansen, "DoubleClick under email attack"; *The Economist*, "The Internet's chastened child."

[111] *The Economist*, "The Internet's chastened child."

Network] that enabled DoubleClick to collect PII from web users, link the information to its profile database, and then match the named profiles with Abacus' records.[112] Highlighting the limits of trade association-led self-regulation, both DoubleClick and Abacus were leading members of the DMA and OPA.

In early February, privacy advocates led by EPIC filed a complaint with the FTC alleging that DoubleClick was "unlawfully tracking the online activities of internet users and combining surfing records with detailed personal profiles."[113] EPIC argued that the merger of the two databases violated prior assurances of anonymity and therefore ran afoul of rules regarding deceptive advertising practices. The complaint requested that the FTC require DoubleClick to obtain permission for all future data collection practices, destroy all wrongfully acquired profile information, and pay civil penalties. At the same time, an overlapping coalition of advocates organized a public letter-writing campaign opposing the data-matching practices. The CDT created an email application that enabled individuals to send complaints to DoubleClick and 60 of its clients.[114] One such client, TheStreet.com, reported receiving 2,200 emails within a few days of the campaign's launch. Within three weeks some 25,000 people had sent messages to

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[112] Ira Teinowitz and Jennifer Gilbert, "Online privacy disputes reach FTC panel, courts," *Advertising Age,* January 31, 2000. To integrate the two databases, DoubleClick essentially formed a new network, Abacus Online: "Participating websites would identify users by name but were required to post a notice explaining the information to be collected and giving users the opportunity to opt out. … Sites participating in Abacus Online not only allowed clickstream data to be collected, but they also collected personal information when individuals identified themselves to the site; e.g., when they made a purchase, completed a survey, or signed up for a drawing. With that personal information the ID number assigned to the cookie on the computer could be associated with the user. The click-stream data then could be combined with Abacus Direct's database of offline information. DoubleClick operated one such site, Netdeals.com, where users could sign up for drawings for prizes, giving their name, age, and street and e-mail addresses. Users who agreed to receive 'valuable offers' were added to its database." Baron, "DoubleClick and Internet Privacy."

[113] Todd, "Politicizing Privacy," 116-117. Again, in the absence of access to these complaints, I rely on Todd.

[114] Hansen, "DoubleClick under email attack." This tactic became commonly used by the media reform movement of the early 2000s.

DoubleClick, while "several thousand" had written to clients.[115] Organizers of both campaigns issued press releases to media outlets regarding their efforts.

The public relations fallout proved substantial. The *Washington Post* called DoubleClick "one of the most vilified companies in the online world" and *USA Today* reported that it had become "the media's poster boy for bad behavior on the web."[116] Responding to EPIC's complaint, the FTC opened a formal investigation into DoubleClick's data collection practices, while a number of state's attorneys general initiated inquiries of their own.[117] It was also revealed that the company had been implicated in several civil lawsuits involving alleged improper consumer profiling without consent.[118] Perhaps most damaging was the attendant slippage of its stock in a financial market that had already begun to show signs of impending collapse. Upon news of the FTC investigation, DoubleClick's share price reportedly dropped by 25% in a single day.[119]

Initially, DoubleClick responded to the criticism by digging in its heels. It is telling that one of its first countermeasures was to hire a politically connected former congressional staffer as its new director of public policy and government affairs, i.e.: "lead lobbyist."[120] The company also stepped up its public relations efforts, announcing a consumer education campaign that included full page advertisements in the *New York Times* as well as 50 million banner impressions directing web users to a newly created website, Privacychoices.org.[121] DoubleClick

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[115] Todd, "Politicizing Privacy," 121.
[116] Howard Kurtz, *The Fortune Tellers: Inside Wall Street's Game of Money, Media, and Manipulation* (New York: Free Press, 2000), 273-4.
[117] John Schwartz, "F.T.C. Drops DoubleClick Inquiry," *New York Times*, January 23, 2001; Troy Wolverton and Greg Sandoval, "Probes are latest headache in e-commerce," *CNET News,* February 16, 2000, http://news.cnet.com/Probes-are-latest-headache-in-e-commerce/2100-1017_3-237012.html?tag=mncol
[118] Evan Hansen, "DoubleClick postpones data-merging plan," *CNET News*, March 2, 2000, http://news.cnet.com/2100-1023-237532.html&dtn.head
[119] *The Economist*, "The Internet's chastened child."
[120] Hansen, "DoubleClick postpones data-merging plan."
[121] Todd, "Politicizing Privacy," 119-120.

also attempted to qualify (albeit in vague terms) the scope of its data collection, saying it did not use "highly sensitive information for profiling such as health information, detailed financial information, information of a sexual nature, and information on children."[122] It also maintained that it would "not link personally identifiable information about a user to online behavior without first giving that user notice and the choice not to participate."[123]

This rhetoric of consumer notice and choice (or "user empowerment") was a constant refrain among defenders of online profiling. On the ground however, DoubleClick's mechanisms for consumer control were far less empowering than the company claimed. First, DoubleClick's *default practice* was to link online profile data with offline PII whenever possible via its Abacus Online Network. As stated in its privacy policy: "Unless specifically disclosed to the contrary in a website's privacy policy, most non-personally-identifiable information collected by DoubleClick from websites on the DoubleClick Network is included in the Abacus Online database."[124] Further, DoubleClick essentially offloaded the burden of disclosing *its own* data collection practices to its massive network of affiliates and clients. As a company executive explained, "Any site that we work with that provides us with personally identifiable information … must provide the user with the notice and choice."[125]

However, the standards to which this requirement was held were poor. As EPIC noted in its FTC complaint, AltaVista (DoubleClick's largest client) acknowledged passing information to third parties but made no specific mention of DoubleClick.[126] Most web users were unaware that by "surfing the site of one of its affiliates, they had entered into an agreement to provide

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[122] Hansen, "DoubleClick under email attack."
[123] Hansen, "DoubleClick under email attack."
[124] Jennifer Gilbert and Ira Teinowitz, "Privacy debate continues to rage, *Advertising Age*, February 7, 2000.
[125] Teinowitz and Gilbert, "Online privacy disputes reach FTC panel."
[126] Ross McGhie, "Internet Advertising: The Internet as a Commercial Mass Medium," (master's thesis, Carleton University, 2003), 199.

DoubleClick with their personal data."[127] Thus, DoubleClick's data collection practices were alleged to be deceptive and unconsented. Jason Catlett of JunkBusters summarized the situation as follows: "Thousands of sites are ratting on you, so as soon as one gives you away, you're exposed on all of them. If you don't like Yahoo's privacy policy, you don't have to use its site. But it's very difficult for consumers to avoid DoubleClick because most don't know when it is collecting information."[128] Moreover, by virtue of its expansive network, DoubleClick's reach extended far beyond that of any single publisher.

DoubleClick made much of the fact that it provided a privacy policy and opt-out mechanism on its own website, noting that 50,000 people had opted out of its tracking system.[129] Again, the catch was that the average web user was unaware of DoubleClick's existence, let alone its opt-out mechanism. As an ad infrastructure provider, DoubleClick's massive internet presence was largely behind-the-scenes. Its access to consumers was mediated through web publishers, who were then responsible for informing people of DoubleClick's data practices and providing some form of notice and control. It should be unsurprising that while 50,000 people may have opted-out of DoubleClick's profiling apparatus, the company maintained some 100 million cookies in circulation across the web that fed into database of 120 million consumer profiles.[130] In other words, DoubleClick's opt-out program was statistically insignificant.

A turning point came in March. The company had been battered in the media for months and the value of its stock was down some 20% since the imbroglio began.[131] DoubleClick was forced to relinquish and Kevin O'Connor fell on his sword, issuing a press release admitting his personal mistake in moving forward with merging the databases "in the absence of government

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[127] McGhie, "Internet Advertising."
[128] Baron, "DoubleClick and Internet Privacy," 6.
[129] Baron, "DoubleClick and Internet Privacy," 6.
[130] See chapters three and four regarding DoubleClick's reach and surveillance infrastructure in general.
[131] Bennett, *The Privacy Advocate*s, 155.

and industry standards."[132] Shortly thereafter O'Connor stepped down as CEO, while privacy advocates cautiously celebrated. The question remains, was this armistice a genuine victory for privacy advocates? What is clear is that the conflict surrounding the DoubleClick/Abacus merger brought data collection practices into sharp relief, crystalizing a set of policy issues that would fundamentally impact the ability of internet advertisers to engage in widespread consumer surveillance as a default practice. Privacy advocates had momentum, but industry was on red alert. Washington was highly attuned to the issues, but 2000 was an election year, which added a layer of political complexity. The policy-making activities over the next 18 months would establish the foundational regulatory framework for internet data collection and consumer privacy at the start of the 21st century.

Rich Lobby, Poor Protection: The Efficacy of Corporate Politics and Limits of Self-Regulation

Privacy advocates achieved another milestone on the heels of DoubleClick's decision to halt its database merging operations. After four years of conceding to industry requests for more time to develop self-regulation, the FTC reversed its position regarding privacy legislation in May 2000. In a 3-2 vote, agency commissioners recommended that Congress "enact legislation that, in conjunction with continuing self-regulatory programs, will ensure adequate protection of consumer privacy online."[133] Chairman Pitofsky tempered the recommendation, offering the caveat that self-regulation had not failed: "On the contrary, self-regulation has made considerable progress. But in certain respects it looks as if self-regulation would be more

[132] Todd, "Politicizing Privacy," 121; Judith Messina, "Kevin O'Connor and the mouse that roared," *Crain's New York Business*, May 15, 2000.
[133] Federal Trade Commission, *Privacy Online: Fair Information Practices in the Electronic Marketplace* (May 2000), iii.

successful if there was some backup legislation."[134] The specific guidelines proposed by the FTC had been jointly drafted by the NAI trade group, so they were hardly stringent, applying only to the collection of personally identifiable information.[135] The proposal recommended that PII data collection be governed according to four "fair information practices": Notice (consumers must be given notice of sites' data practices), Choice (consumers must be given choices regarding how their data is used by third parties), Access (consumers must be given access to their data for review, correction, or deletion), and Security (sites must take steps to protect the security of consumer data).[136]

Due in no small part to the actions of privacy advocates, online privacy issues had "gone off the Richter scale in terms of public sensitivity."[137] One survey of "experienced internet users," found that 87% of respondents were "somewhat or very concerned about threats to their privacy online."[138] With elections looming, the White House and both parties in Congress increased their focus on the issue. House Democrats convened a Privacy Task Force, while the Senate created a bi-partisan Congressional Privacy Caucus.[139] "This year's campaign slogan could be: It's online privacy, stupid," wrote *BusinessWeek*.[140] According to one account, by early 2000 "more than one hundred privacy bills had been introduced in the legislatures of 41 states," and by May, laws had been passed in ten.[141] Congress, too, was busy, holding no less than ten committee hearings on the subject between 1998 and 2000 and introducing numerous pieces of legislation.

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[134] Baron, "DoubleClick and Internet Privacy," 8.
[135] Federal Trade Commission, *Online Profiling: A Report to Congress*, June 2000, 22.
[136] Federal Trade Commission, *Privacy Online: Fair Information Practices in the Electronic Marketplace* (May 2000), 36-37.
[137] Heather Green, "Privacy: Outrage on the Web," *BusinessWeek*, February 14, 2000.
[138] Federal Trade Commission, *Self-regulation and Privacy Online: A Report to Congress* (July 1, 1999), 2.
[139] Simon, *NetPolicy.Com*, 145.
[140] Green, "Privacy: Outrage on the Web."
[141] Simon, *NetPolicy.Com*, 143.

In line with FTC recommendations, Republican John McCain of Arizona introduced a representative bill requiring companies to provide "conspicuous notice" of their data practices.[142] Other members of Congress pushed for a policy framework that went beyond the FTC's proposals. Democrats in both houses introduced plans that included a measure that privacy advocates had been requesting for years and that was universally reviled throughout the online advertising sector: a mandate that the default regime of data collection be *opt-in*, rather than *opt-out*. As summarized by the *Wall Street Journal*: "Beneath all the fuss about cookies and databases, the debate about internet privacy comes down to two very different approaches. In privacy jargon, the first is known as opt-in. Marketers agree not to collect or use personal data unless you affirm that you want to participate in their programs. Opt-out takes the opposite tack, assuming you want to participate unless the site hears otherwise."[143]

McCain's proposed legislation was opt-out. Though it would mandate privacy policies, it left data collection as the default practice. Representative of the opt-in strategy was the Consumer Privacy Protection Act proposed by Senator Fritz Hollings of South Carolina.[144] This was one of several high-profile opt-in bills that would have required all website operators to obtain "affirmative consent in advance from consumers before collecting and using or disclosing personally identifiable information."[145] "Any bill that does not have the opt-in is just whistling Dixie," said Hollings at a committee hearing.[146] Opt-in represented a significant change to the

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[142] Greg Sandoval, "McCain-led group introduces Net privacy bill," *CNET News*, July 26, 2000, http://news.cnet.com/McCain-led-group-introduces-Net-privacy-bill/2100-1017_3-243708.html?tag=mncol
[143] Thomas E. Weber, "To Opt In or Opt Out: That Is the Question When Mulling Privacy," *Wall Street Journal*, October 23, 2000.
[144] Other proposed bills of note: Electronic Privacy Bill of Rights Act of 1999 and The Secure Online Communication Enforcement Act of 2000.
[145] L. Scott Tillett, "Pressure Builds For Privacy Laws," *InternetWeek*, June 5, 2000.
[146] Senate Committee on Commerce, Science, and Transportation, *Internet Privacy Concerns* [Hearing 106-1147], Remarks of Ernest Hollings, October 3, 2000, 6.

status quo. Online advertising business models and self-regulatory frameworks (to the extent that they existed) were firmly grounded in surveillance as the default setting.

As Congress debated these approaches, *The New York Times* reported of a "nervousness among internet marketers about the public relations and regulatory minefields they know lie ahead."[147] Marketers understood that a requirement to obtain consent from people in advance of data collection would severely impede the surveillance-based advertising model they had been building on the web. The "digital enclosure" movement was grounded in data collection as the default condition of internet use, yet most internet users were opposed to rampant surveillance.[148] Industry associations and coalitions foretold of apocalyptic consequences for economic growth and technological innovation should any kind of opt-in framework be adopted. According to the ANA, "The whole question of target marketing [was] at risk."[149] The trade press mounted vitriolic defenses of data collection practices and accused privacy advocates and government regulators of neo-luddism. As Thornton May, a consultant and "corporate futurist," spouted in *Advertising Age*:

> Congratulations, interactive marketers: You have been anointed the new villains of the digital age. Like the chemical polluters of the 1960s, the napalm makers of the '70s, the oil companies of the '80s, and the HMOs of the '90s, interactive marketers are on the cusp of some very bad press. … These cyber-left-behinds, data privacy tree-huggers, and self-appointed guardians of digital rights for the bit-challenged, privacy-violated hoi polloi have targeted interactive marketers as the 'digital satans' of the wired world.

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[147] Randall Rothenberg, "An Advertising Power, but Just What Does DoubleClick Do?," *New York Times*, September 22, 1999.
[148] Mark Andrejevic, *ISpy: Surveillance and Power in the Interactive Era* (Lawrence: University Press of Kansas, 2009).
[149] Wendy Melillo, "Getting personal," *Adweek*, March 27, 2000.

> Privacy is their rallying cry. … Unless you mobilize a counteroffensive today … we will be forever branded the bad boys on the digital block.[150]

Industry rallied to create increased lobbying and public relations efforts. The most powerful internet companies including DoubleClick, Amazon, eBay, Yahoo, and Excite "planted their corporate flag's in the nation's capital," establishing Washington "government affairs" offices.[151] "Washington is no longer this great East Coast bogeyman, a place where you can trot out your CEO once or twice a year," said one corporate policy expert. "Internet companies must include a policy component in their business model."[152] "If the industry moves aggressively, there is still a shot to forestall legislation," said an executive at CMGI's Engage.[153]

In addition to closed-door lobbying efforts, trade groups and individual companies testified in force at congressional hearings. The Online Privacy Alliance (OPA) hired as its director Christine Varney, a former FTC Commissioner involved in the agency's early examinations of online privacy.[154] Under Varney's leadership, the OPA became a strident advocate for industry self-regulation and "user empowerment," publishing privacy policy guidelines for its members and appearing frequently in press coverage of privacy issues.[155] Representing the OPA, Varney testified twice at Congressional subcommittee hearings regarding privacy issues, advancing a position that was uniformly against legislative action, opposed to giving the FTC increased authority to police privacy violations, and in support of industry self-

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[150] Thornton May, "Privacy's Pariahs; If interactive marketers aren't careful, we will be branded the bad boys on the digital block," *Advertising Age*, April 17, 2000.
[151] W. John Moore, "Invasion of the internet industry," *National Journal*, March 18, 2000.
[152] Moore, "Invasion of the internet industry."
[153] Wendy Melillo, "Private matters," *Adweek*, June 19, 2000.
[154] Steve Lohr, "Seizing the Initiative on Privacy," *New York Times*, October 11, 1999.
[155] Bayne, "Privacy still burning web issue."

regulation.[156] This quote from her testimony before the Senate Committee on Commerce, Science, and Transportation in May 2000 is exemplary of broader industry arguments:

> "What we do not need are sweeping regulations governing the collection and use of data [or] the conditions and methods under which that data use can be consented to… Whatever solutions Congress, industry, and consumers come to that will make privacy choices on the internet ubiquitous, the solutions must be technology neutral, market driven, and hospitable to the online [business] environment." [157]

Amidst industry public relations teams, the trappings of privacy protection became a "new religion."[158] DoubleClick, in the aftermath of the Abacus media firestorm, hired New York City's former consumer affairs commissioner to serve in the newly created position of Chief Privacy Officer and assembled an external advisory board led by a former New York attorney general to consult on privacy issues.[159] Other internet marketers followed suit.[160] Whatever their operative functions, the creation of these positions appeared to be highly "symbolic, as indicated by the fact that they worked more closely with internal marketing and public relations departments than management and operations."[161] Separately, the AAAA, ANA, and DMA floated the idea of launching a $25 million ad campaign to address the public about privacy issues.[162] As might be expected from the advertising industry, public relations efforts such as

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[156] Senate Committee on Commerce, Science, and Transportation, *Online Privacy Protection Act of 1999* [Hearing 106-1044], July 27, 1999; Senate Committee on Commerce, Science, and Transportation, *To Review the Federal Trade Commission's Survey of Privacy Policies Posted by Commercial Web Sites* [Hearing 106-1116], May 25, 2000.
[157] Senate Committee on Commerce, Science, and Transportation, *To Review the Federal Trade Commission's Survey of Privacy Policies Posted by Commercial Web Sites* [Hearing 106-1116], May 25, 2000.
[158] McGhie, "Internet Advertising," 204.
[159] Messina, "Kevin O'Connor and the mouse that roared."
[160] McGhie, "Internet Advertising," 204.
[161] McGhie, "Internet Advertising," 204.
[162] Melillo, "Getting personal."

these have a long lineage in media policy history and in this case, aggressive industry PR campaigning simply overwhelmed the meager resources available to privacy advocates.[163]

The OPA's hiring of Varney and DoubleClick's hiring of former New York public officials are prime examples of the fully legal political corruption that plagues the nation's regulatory and legislative systems. Much like public relations campaigns, this "golden revolving door" strategy is a staple of American political lobbying.[164] From Congress to the Department of Homeland Security, the US Treasury Department to the Federal Communications Commission, the scale of this particular form of corruption is overwhelming. By one count, former lobbyists working for Congress outnumbered elected lawmakers in 2011.[165] The revolving door strategy is so prevalent because it is often highly effective. Framing policy-making in these terms helps to contextualize the fact that despite overwhelming public support, privacy legislation was, as one observer put it, "something of a political football in Congress."[166] As previously noted, Congress held no les than ten hearings on online privacy issues between 1998 and 2000 and introduced dozens of bills containing varying degrees of consumer protections. The only bill to make it out of committee, let alone be passed into law, was the Children's Online Privacy Protection Act (COPPA). Industry was successful not only in defeating opt-in measures, but in forestalling any privacy legislation whatsoever outside of COPPA.

COPPA was a laudable, but ultimately limited, victory. Privacy advocates who initially supported the legislation have since criticized its implementation. EPIC has demonstrated that

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[163] Stole, *Advertising on Trial.*
[164] Lawrence Lessig, *Republic Lost* (New York: Twelve, 2011); "The Golden Revolving Door," *The New York Times*, June 20, 2006, http://www.nytimes.com/2006/06/20/opinion/20Tues3.html; Julie Creswell and Ben White, "The Guys from 'Government Sachs,'" *The New York Times*, October 17, 2008, http://www.nytimes.com/2008/10/19/business/19gold.html?pagewanted=all&_r=0
[165] "Former Lobbyists Working for Congress Outnumber Elected Lawmakers," *Legistorm*, September, 13, 2011, http://www.legistorm.com/blog/former-lobbyists-working-for-congress-outnumber-elected-lawmakers.html
[166] Patricia Jacobus, "Cookies targeted as Congress, advocates address Net privacy," *CNET News*, February 11, 2000, http://news.cnet.com/Cookies-targeted-as-Congress%2C-advocates-address-Net-privacy/2100-1023_3-236800.html?tag=mncol

the FCT has failed to adequately enforce the bill's protective provisions and has argued that its specifications have become outmoded by the dramatic growth of social networks such as Facebook.[167] Kathryn Montgomery of the CME, a leader within privacy advocacy network who worked with the FTC to draft initial language for COPPA, has acknowledged that the bill as it passed contained loopholes and placed an excessive burden on parents to maintain a haphazard system of privacy protection.[168] Ultimately, COPPA is reminiscent of the passage of the Wheeler-Lea Amendment to the Federal Trade Commission Act in 1938 as recounted by Stole.[169] Like Wheeler-Lea, COPPA's passage perhaps serves to obstruct more ambitious regulatory efforts, specifically the movement to limit data collection more broadly via the implementation of an opt-in policy framework. Still, Montgomery maintains that COPPA did curtail some of the more egregious practices that might have become commonplace without government oversight.

Jeff Chester, another leading figure within the privacy advocacy network and the media reform movement more generally, said in an interview that COPPA was significant not because the law was strong on protections, but because of the organizing effort itself.[170] "The fact that one tiny non-profit advocacy group was able to overcome the opposition of the online ad industry as well as the White House to get legislation passed that limited the ability of marketers to have this one-on-one paradigm with kids is remarkable given the history [of media policy-making]."[171] Without a doubt, it helped that opposing the protection of children was a rather

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[167] Marc Rotenberg, "An examination of children's privacy: New technologies and the Children's Online Privacy Protection Act," http://epic.org/privacy/kids/EPIC_COPPA_Testimony_042910.pdf
[168] Montgomery, *Generation Digital,* 103.
[169] Stole, *Advertising on Trial.*
[170] Chester, interview. A future study might demonstrate the linkages between the online privacy advocacy network and the media reform movement that coalesced in the 2000s. Led by Free Press, the media reform movement involved many of the seasoned activists from the privacy struggles described herein.
[171] Chester, interview. Chester also noted that during the period media activists were also organizing around other issues such as the 1996 Telecommunications Act and media ownership issues.

unpopular stance for political elites. In the undemocratic tradition of media policy-making that has solidified since the 1930s, many of the key decisions regarding internet development were made behind closed doors with minimal public participation or awareness.[172] Thanks to the labor of advocates, online privacy represented one of the few internet policy issues that achieved any semblance of public debate during this crucial period. Beyond COPPA, the very existence of the proposal by Hollings and others regarding broader opt-in privacy legislation is evidence of the political efficacy of privacy advocates, whose efforts were aided by a more "organic" public concern stemming from increased internet use in general and the rapidly growing consumer surveillance occurring across a spectrum of visibility and social acceptability. That some bills contained strong opt-in provisions also indicates that there was some magnitude of political capital for Congress to cross the marketing complex.

The larger truth remains that if privacy advocates won some battles, the marketing complex won the war. In defeating privacy legislation, industry was successful in extending the status quo of advertising self-regulation to the internet under a weakly implemented opt-out regime. In this instance, power operated structurally. While instrumental exertions of corporate influence may indeed have been present, it is difficult to demonstrate direct causal linkages from industry lobbying to the failure of Congress to legislate meaningful privacy protections. Nevertheless, a theme of this dissertation has been that disparate actors within the marketing complex broadly conceived came together to construct an advertising-supported internet. Smaller rivalries aside, these companies had a shared interest in creating the largest possible canvas for advertising practices and needed to redefine the potentialities of the new internet medium accordingly.

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[172] McChesney, *Rich Media, Poor Democracy,* 123-136; Matthew Crain, "Framing Internet Policy in the Clinton White House," Manuscript in preparation.

Calls to reign in data collection practices became obstructive to these goals and therefore needed to be neutralized. As reflected in the construction of an online surveillance infrastructure, pervasive data collection was becoming indispensible to convergent marketing practices. It was essential that unrestrained data collection be encoded into the legal (and technical) structure of the developing internet medium, despite that a growing majority of individuals felt that they needed more – not less – privacy on the internet. This is the context for the formation of sector-spanning coalitions such as the OPA and NAI, which illustrate the "co-respective behavior" of otherwise competing interests.[173] Corporate efforts to control public policy-making present a counterpoint to the Get Big Fast narrative of finance and infrastructure presented in prior chapters. Here the goal was to delay any assertive government regulation while the new online ad infrastructure was being put into place.

Against a vast corporate lobbying effort and a neoliberal political zeitgeist, bills that contained opt-in provisions had little chance of success. Beyond the fact that, as Magaziner said in an interview, "it is hard to underestimate the power of some of the groups who were lobbying for opt-out," the US economy had been overtaken by the dotcom financial boom.[174] Actions that were perceived as threats to economic growth – even if dubiously constructed as such – were politically untenable. Moreover, both houses of Congress were controlled by the Republican Party, which was on the whole even more supportive of government "deregulation" than neoliberal Democrats. In the words of one journalist regarding privacy legislation: "If you believe these bills will pass, I have a can't-miss dotcom to sell you."[175] The FTC, too, was

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[173] The concept of "co-respective behavior" is accredited to Joseph Schumpeter, but Baran and Sweezy argued that it became a normal operation of large companies as capitalism advanced to a monopoly stage. Paul A. Baran and Paul M. Sweezy, *Monopoly Capital: An Essay on the American Economic and Social Order* (New York: Monthly Review Press, 1966), 50.
[174] Magaziner, interview.
[175] David Joachim, "Internet Privacy Debate Is Dead," *InternetWeek*, April 16, 2001.

embedded within power structures that severely limited its efficacy. Despite overwhelming evidence that self-regulation had failed to uphold even the most basic of privacy protections, the agency repeatedly abstained from recommending legislation, perpetually citing renewed industry commitments to find self-policing solutions. It took a "focusing event" like the DoubleClick/Abacus merger and a sustained advocacy campaign to move the agency to meaningful action.

In this scenario the range of acceptable debate was circumscribed. Discussion was largely restricted to issues of consumer awareness, limited notions of user empowerment, and the personal character of the data being collected. The controversy at the heart of the DoubleClick Abacus merger was whether companies could combine anonymous online profile data with personally identifiable information obtained from offline sources. The social desirability of online advertising, consumer surveillance, or the commercial structure of the internet more broadly were never on the table. Opt-in measures, the most progressive proposed legislation, still did not approach structural issues. As McChesney has shown, media criticism during this period became increasingly confined to "liberal" debates taking place within market structures, rarely questioning the validity of the market as an organizing force.[176] According to Chester, privacy advocates had no option to substantively tackle issues beyond those pertaining to children; there was "no political support for that."[177]

As one commentator noted, it was a "familiar do-si-do between government and industry. The government is acting OK so long as it appears to be protecting consumers against harmful practices. And businesses are acting OK so long as they appear to have consumers' interest in

[176] McChesney, *Rich Media, Poor Democracy,* 126.
[177] Chester, interview.

mind with privacy policies that no one can understand."[178] This is unsurprising from a critical structural perspective which situates the state "in general terms as an agency of upper-class interests, but specifically, as an institution that is fought over by all of society on a playing field that is sloped in favor of those with capital."[179] As such, the détente between government and the private sector regarding privacy issues was ultimately politically safe.

While the government appeared to be doing its job, the regime of self-regulation that was extended to the internet medium was patently bad for the privacy of web users and overwhelmingly positive for an online advertising industry with surveillance at its core. Surveying the outcomes of the political struggle over internet privacy, EPIC's Rotenberg concluded that "online consumers are more at risk today than they were in 1997."[180] The major solutions put forth by industry were the implementation of privacy policies and paltry opt-out mechanisms, which allowed companies to claim they were providing consumers with control over their information, while leaving an open door for unrestrained data collection.[181] Self-regulation had a double meaning in this sense: industry was responsible for setting its own standards of behavior and policing itself and users were "empowered" through opt-out mechanisms to regulate their own privacy interactions online. However, the execution of these measures was deeply flawed.

Privacy policies were by and large incomprehensible. Even Senator McCain complained that "too many privacy policies confuse and contradict rather than provide a conspicuous notice of a consumer's rights."[182] The *Wall Street Journal* summarized the issue using the example of

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[178] Joachim, "Internet Privacy Debate Is Dead."
[179] Robert W. McChesney, *Communication Revolution: Critical Junctures and the Future of Media* (New York: New Press, 2007), 51.
[180] Stefanie Olsen, "Top web sites compromise consumer privacy," *CNET News*, December 17, 1999, http://news.cnet.com/Top-Web-sites-compromise-consumer-privacy/2100-1017_3-234631.html?tag=mncol
[181] The other Fair Information Principles articulated by the FTC, "access" and "security," were apparently ignored.
[182] Sandoval, "McCain-led group introduces Net privacy bill."

Yahoo, long one of the most popular sites on the web. "Yahoo's statement is two pages long and packed with links to other pages you need to read to fully comprehend it. It's also sprinkled with euphemisms."[183] Attempting to read the policy highlighted "the burden placed on consumers who want to opt out of web tracking efforts. Sixteen paragraphs in, users learn that Yahoo doesn't vouch for the advertising networks that insert ad banners onto its pages. Those networks … have their own privacy policies. So if you use Yahoo and want to opt-out of such tracking, you'll need to visit the websites of every ad network Yahoo works with – all 19 of them."[184]

Under the auspices of industry self-regulation, the "fair information principles" of notice and choice were implemented in such a way that they served the exact opposite purposes for which they were designed. Rather than providing genuine notice, privacy policies "let users know as little as possible about data collection activities, in as polite but complex a fashion as possible so that they wouldn't understand what was going on but could feel good about them."[185] Privacy seal programs such as TRUSTe and BBBOnline awarded certification based on the existence of privacy policies without taking into consideration their actual contents or legibility. Any data practice, no matter how egregious, was eligible to receive a seal of approval as long as it was "properly disclosed" in a privacy policy of some kind.[186] Likewise, mechanisms for consumer control were feeble at best. Opt-out, a "concept cloaked in the rhetoric of consumer freedom, was designed to ensure that data collection would become the default in online business transactions."[187] In 2001 the NAI created a web application that ostensibly enabled web users to opt-out of its member companies' behavioral targeting programs by downloading a series of opt-out cookies. Since the opt-out system was cookie based, it was limited to specific browsers on

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[183] Weber, "To Opt In or Opt Out."
[184] Weber, "To Opt In or Opt Out."
[185] Joseph Turow, *Niche Envy: Marketing Discrimination in the Digital Age* (Cambridge: MIT Press, 2006), 83.
[186] Todd, "Politicizing Privacy," 90-91.
[187] Montgomery, *Generation Digital,* 81.

specific computers and would need to be reinstalled if a browsers' cache of cookies were ever cleared.[188]

Still another critique of self-regulation is the lack of enforcement against those who violate agreed upon rules, so-called "bad actors." The period was characterized by seemingly regularly scheduled technology-based privacy abuses from within the private (and public) sectors.[189] Most prominently, Intel embedded unique identifiers into its Pentium III microchips that enabled identification of individual computers.[190] Microsoft, too, included unique identifiers in a version of its Windows operating system. Self-regulatory organizations such as TRUSTe, of which Microsoft was a supporter, ruled that the practice was not a violation of its standards because the tracking mechanism was deployed via software, not the Microsoft website.[191] Even while DoubleClick faced heavy scrutiny for merging online and offline data, other ad infrastructure providers engaged in similar practices and remained relatively unscathed. DoubleClick competitor 24/7 Media also matched online and offline profiles during this period through an agreement with a company called Naviant (later purchased by Equifax), while RealNetworks was caught collecting information on users' internet activity without disclosure and in violation of its own privacy policy.[192] The failed online retailer Toysmart attempted to

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[188] Networked Advertising Initiative, "Understanding online advertising: Frequently asked questions," http://www.networkadvertising.org/faq

[189] In July 2000, the White House ordered its drug policy office to stop using web bugs on an anti-drug site. Following the mandate, the Clinton administration issued strict new rules regulating federal use of the technology. In September, the General Accounting Office issued a study showing that most government sites failed to meet the standards for commercial sites proposed by the FTC. Stefanie Olsen, "Nearly undetectable tracking device raises concern," *CNET News*, July 12, 2000, http://news.cnet.com/Nearly-undetectable-tracking-device-raises-concern/2100-1017_3-243077.html?tag=mncol; Jim Hu and Melanie Austria Farmer, "Study: Government Web sites weak on privacy, security," *CNET News*, September 12, 2000, http://news.cnet.com/Study-Government-Web-sites-weak-on-privacy%2C-security/2100-1023_3-245604.html?tag=mncol

[190] Bennett, *The Privacy Advocates,* 151-152; Simon, *NetPolicy.Com*, 143-4. Intel eventually abandoned these plans amidst public scrutiny and a campaign by privacy advocates, many of which were involved opposing the DoubleClick/Abacus merger.

[191] Todd, "Politicizing Privacy," 90-91.

[192] McGhie, "Internet Advertising," 203; Baron, "DoubleClick and Internet Privacy," 5.

auction off its customers' personal information as part of its liquidation process.[193] In all of these cases, any abatement of offending practices was due to the intervention of privacy advocates and/or news outlets, not self-regulatory bodies. A final quote from an ode to self-regulation from the editorial pages of *Advertising Age* demonstrates the system's weaknesses with unintended irony: "Twenty-five years of testing leaves no doubt that the people who created advertising self-regulation designed a service so non-intrusive that the individual advertising person is barely aware of its existence."[194]

By 2001, the issue of online consumer privacy protection had been substantively dropped by all branches of federal government. After George W. Bush's presidential victory in 2000, the limited "political capital of privacy activists dried up."[195] The FTC had quietly concluded its investigation of DoubleClick's data collection practices without saying whether or not deception or other violations had occurred. Many of the civil suits against the company were dropped as well.[196] The "Internet Privacy Debate is Dead," declared *InternetWeek*. [197]

The surveillance infrastructure has grown since the turn of the century and privacy debates have been periodically resurrected. The expansion of data collection practices to mobile devices has been a particular area of concern, as have new forms of data exchange that fall under the umbrella of "big data." These issues are briefly addressed in the dissertation's conclusion. I want to end this chapter by gesturing to the flaws inherent in a particular rhetorical shield utilized by industry to deflect meaningful privacy legislation in the 1990s that remains widely used today: the condition of anonymity. The argument here is not especially sophisticated. Recall the

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[193] Sandoval, "McCain-led group introduces Net privacy bill"; The Federal Trade Commission filed suit against Toysmart over the issue, which settled.
[194] Cohen, "Self-regulation: Accepting responsibility."
[195] Chester, interview.
[196] Joachim, "Internet Privacy Debate Is Dead."
[197] Joachim, "Internet Privacy Debate Is Dead."

reasoning of DoubleClick's O'Connor: "We can't invade anyone's privacy because we don't know who you are."[198]

The argument is bogus for at least two reasons. As explained above, DoubleClick and others were in fact very interested in collecting personally identifying information (PII) and took aggressive steps to merge online and offline information. Today PII is routinely collected and used for advertising and marketing purposes. Secondly, research has shown that the PII designation has become meaningless as sorting technology has advanced. Not only can PII be ascertained using relatively few non-PII data points, but, functionally, surveillance and profiling proceed even if users remain "anonymous."[199] As the FTC noted in 2000, "Although much of the information that goes into a profile is fairly innocuous when viewed in isolation, the accumulation over time of vast numbers of seemingly minor details about an individual produces a portrait that is quite comprehensive and, to many, inherently intrusive. … Regardless of whether they contain personally identifiable information, profiles are used to make decisions about the information individuals see and the offers they receive."[200]

There is an element of duplicity and perhaps disrespect present when industry representatives reassure internet users and policy-makers of the anonymous nature of their data, while simultaneously peddling hyper-individualized advertising services to marketers and investors. In this sense, the whole of the online advertising industry is premised on a fundamental deception, the regulation of which should surely fall within the Federal Trade

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[198] Schrage, "Kevin O'Connor."

[199] "The underlying assumption is that "personally identifiable information" is a fixed set of attributes such as names and contact information." If these types of information are not collected, or, as is increasingly the case, PII is scraped from data prior to exchange, the argument follows that "they magically become safe to release, with no way of linking them back to individuals." However, "the versatility and power of re-identification algorithms imply that terms such as 'personally identifiable' … simply have no technical meaning. While some attributes may be uniquely identifying on their own, any attribute can be identifying in combination with others." Arvind Narayanan and Vitaly Shmatikov, "Privacy and Security: Myths and Fallacies of 'Personally Identifiable Information,'" *Communications of the ACM*, *53*, no, 6 (June 2010), 25-6.

[200] Federal Trade Commission, *Online Profiling: A Report to Congress* (June 2000), 12-13.

Commission's purview. If addressing this issue falls outside the FTC's legal authority to regulate deceptive advertising practices, then the spirit of that mandate is hollowed and the law must be revised. As Louis D. Brandeis and Samuel D. Warren understood over a century ago:

> "The narrower doctrine may have satisfied the demands of society at a time when the abuse to be guarded against could rarely have arisen without violating a contract or a special confidence; but now that modern devices afford abundant opportunities for the perpetration of such wrongs without any participation by the injured party, the protection granted by the law must be placed upon a broader foundation."[201]

[201] Louis D. Brandeis and Samuel D. Warren, "The Right to Privacy," *Harvard Law Review*, 4 (1890), 210-11. Quoted in Jessica Thill, "The Cookie Monster: From Sesame Street to Your Hard Drive," *South Carolina Law Review*, 52 (2001), 921.

Conclusion

The Legacy of the Dotcom Era

As the leading contemporary online advertising company, Google has been conspicuously absent in this dissertation. As of early 2013, Google held two-thirds of the US web search market and was the most popular search engine globally.[1] This market position has enabled it to dominate the online advertising market. In 2012 Google accounted for an estimated 45% of all US online advertising revenues and one out of ten advertising dollars spent *across all media*.[2]

While Google began developing its search engine technology in 1996 and was incorporated in 1998, many see it as a post-dotcom era company with little connection to banner ads and the financial mania of the bubble. Indeed, Google did not offer ad services of any kind until October 2000, when it began to pair "contextual" keyword advertising with its web search results. This first version of its AdWords service followed the standard banner pricing model (cost per thousand impressions, or CPM) and grew fairly slowly.[3] It was not until late 2001 that Google reengineered the service to be more heavily attuned to "relevance" and follow the now familiar auction-based pay-per-click (PPC) pricing system.[4] Shortly thereafter the company launched a companion product, AdSense, which allowed web publishers of all sizes to host similar contextual ads under revenue sharing agreements. These two innovations set Google on the path to become the premier provider of online advertising services.

It is important to emphasize that Google's approach to advertising was of a different character than the surveillance infrastructure strategy. While building on the ad network

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[1] Danny Goodwin, "Google Once Again Claims 67% Search Market Share," *Search Engine Watch*, February 18, 2013, http://searchenginewatch.com/article/2244472/Google-Once-Again-Claims-67-Search-Market-Share
[2] eMarketer, "Google Edges Closer to Facebook as US Display Advertising Becomes Two-Horse Race," February 22, 2012, http://www.emarketer.com/newsroom/index.php/google-edges-closer-facebook-display-advertising-twohorse-race/
[3] Ken Auletta, *Googled: The End of the World as We Know It* (New York: Penguin, 2009), 61.
[4] Google settled a patent infringement lawsuit regarding this pricing scheme.

distribution model, Google's mechanism for producing relevant ads was based primarily on the context in which they appeared rather than via consumer profiling.[5] The context for search ads was provided by the keywords entered by users, while ad placement on the AdSense network was determined by the content of the hosting website. An ad for a musical instrument retailer might be paired with a web search for guitar chord charts or a fan-produced weblog dedicated to The Band. Many marketers judged this strategy to be equally if not more effective than profile-based banner ads and found the PPC pricing structure highly attractive. In the early 2000s, context seemed to trump surveillance as the preferred means of targeting ad messages.

Keyword search went from comprising just 6% of internet advertising in 2001 to 35% in 2003, supplanting banners as the most popular format.[6] At the top of the search advertising heap was Google. During this period, the proportion of total spending dedicated to "display" advertising – the new moniker for banners and other graphical formats – fell from over half in 1999 to settle in around 20%. Although search-based keyword advertising became the most important online category, the surveillance infrastructure model remained under construction. DoubleClick endured as the market leader in targeted banner ads and consumer profiling, but faced increasing low-cost competition in these areas from rivals. Hobbled after the collapse of the dotcom bubble, DoubleClick was sold to a private equity firm in 2005 for $1.1 billion, a tenth of it former market capitalization.[7] More dependent upon the bubble's inflated financial markets, CMGI fared much worse as the value of its stock was decimated in the crash (shares that once traded at $160 traded for less than $1 by 2002).[8] Writing off some $65 million in debt, CMGI cut

[5] Of course Google was not the only company pursuing this model, but it was by far the most successful.
[6] Interactive Advertising Bureau, *2002 IAB Internet Advertising Revenue Report* (June 2003); Interactive Advertising Bureau, *2003 IAB Internet Advertising Revenue Report* (April 2004).
[7] Brian Morrissey, "Private equity firm to buy DoubleClick," *Adweek*, April 25, 2005.
[8] Dawn Kawamoto, "CMGI severs Engage ties," *CNET News*, http://news.cnet.com/CMGI-severs-Engage-ties/2100-1030_3-957218.html

ties with its Engage division, which was reorganized as a privately held reincarnation of one of its own subsidiaries, Accipiter.[9] Free of major financial burden, Accipiter was rebuilt into a successful infrastructure provider once more, serving over 50 billion ads a month in 2006 before being acquired by one of DoubleClick's major competitors, aQuantive.[10]

By 2004 the keyword format accounted for 40% of internet advertising, where it has hovered ever since.[11] Even though the total amount of online ad spending had quickly resumed growth after the dotcom crash (nearly reaching $10 billion in 2004), the proportion of that spending going to search had plateaued in just three years. Google found itself in control of a saturated domestic search market that accounted for nearly 100% of its revenues. Moreover, the company was facing renewed competitive efforts by Microsoft and Yahoo in search-based advertising. After going public in a lucrative and massively hyped IPO, Google needed to diversify its service offerings to maintain forward momentum. "Google is a one-trick pony," declared an analyst with Forrester Research. "It's a nice-looking pony. But they have to grab a bigger piece of the display advertising market."[12]

Google began to move into display with limited success, adding basic graphics to its text-based AdSense service and striking a deal with AOL to tap into its sales force in order to sell banner ads on Google's AdSense network sites.[13] As broadband internet service provision diffused and improved, online video emerged as a new frontier for advertising. Enamored with prospects for "interactive television" since the early 1990s, marketers were eager to test out the format, which became the newest addition to the display category. In 2006, Google acquired the

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[9] David Shabelman, "Another CMGI holding goes under," *The Daily Deal*, June 18, 2003.
[10] *Business Wire*, "Accipiter Celebrates 10th Anniversary, June 7 2006; David Ranii, "Seattle company to buy Accipiter," *McClatchy Tribune Business News*, December 13, 2006.
[11] Interactive Advertising Bureau, *2003 IAB Internet Advertising Revenue Report* (April 2004).
[12] Chris Gaither, "Google Aspires Beyond Text Ads," *Los Angeles Times*, April 25, 2005.
[13] Saul Hansell, "Google to Sell Type of Ad It Once Shunned," *New York Times*, May 13, 2004.

explosively popular (and virtually advertising-free) YouTube web video platform. Recall that at this time Google's advertising strategy was still firmly anchored in the contextual model. To effectively exploit video and move more forcefully into the display market, Google needed to expand beyond keyword advertising. It needed to move into the business of consumer surveillance.

Still the industry standard ad infrastructure provider and now under private equity ownership, DoubleClick was a prime target for acquisition.[14] In early 2007 Google and Microsoft entered into a bidding war, which Google won paying a $1 billion premium.[15] The final cost was $3.1 billion (in stock), nearly double what Google paid for YouTube. The acquisition provided Google with an immediate leadership position in serving targeted display ads – at the time DoubleClick was serving as many as 20 billion per day – but more importantly, it plugged Google into the massive surveillance infrastructure that DoubleClick had been building for over ten years.[16] DoubleClick's broad service offerings yielded an expansive roster of clients and partners from both the supply side (web publishers) and the demand side (marketers and ad agencies) of the ad market. This enabled Google to "lock the interactive agencies and media buyers deeper into their clutches, and by waving rich media opportunities like video at marketers, offer an integrated network that [was] easy to buy, easy to measure, and easy to manage."[17]

In the wake of the transaction, Google's rivals did two things. They mounted what became an unsuccessful challenge to the legality of deal on anti-trust grounds and they went

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[14] David C. Churbuck, "Google and the Rebirth of Banner Ads," *BusinessWeek*, April 26, 2007, http://www.businessweek.com/stories/2007-04-26/google-and-the-rebirth-of-banner-adsbusinessweek-business-news-stock-market-and-financial-advice
[15] Auletta, *Googled*, 174.
[16] Auletta, *Googled,* 174.
[17] Churbuck, "Google and the Rebirth of Banner Ads."

shopping. In its largest acquisition to date, Microsoft paid $6 billion in cash for aQuantive, the ad services provider that a year earlier had purchased Accipiter/Engage.[18] That deal came one day after the WPP advertising holding company bought 24/7 Real Media, another survivor of the dotcom crash, and one month after Yahoo – already a leader in display advertising – acquired the remainder of the privately-held Right Media data exchange that it didn't already own.[19]

Of course, the other key spoil of Google's DoubleClick acquisition was the latter's massive trove of consumer data. One year to the day after completing the takeover, Google reversed its long-standing policy of abstaining from behavioral/profile-based ad targeting and introduced what was branded as a new "interest-based" advertising program for AdSense and YouTube.[20] In other words, Google began to integrate its technologies and expertise with DoubleClick's in order to move beyond contextual advertising to offer targeted ads based on consumer profiles.[21] "These ads will associate categories of interest … with your browser, based on the types of sites you visit and the pages you view," said Susan Wojcicki, VP of Product Management. "We may then use those interest categories to show you more relevant text and display ads."[22] Over the next few years, surveillance-based advertising, conducted on an opt-out basis, was integrated into various Google products from personalized web search to Gmail (e-mail service) to YouTube. As the company's founders reported in 2009, Google had "really benefited from a successful integration with DoubleClick," which brought ad serving and

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[18] NBC News.com, "Microsoft to buy online advertising firm," May 18, 2007, http://www.msnbc.msn.com/id/18736303/ns/business-us_business/t/microsoft-buy-online-advertising-firm/#.TzGY7ONSTcY

[19] NBC News.com, "Microsoft to buy online advertising firm."

[20] Susan Wojcicki, "Making ads more interesting," *Google Official Blog*, March 11, 2009, http://googleblog.blogspot.com/2009/03/making-ads-more-interesting.html; Held up by challenges from competitors and privacy advocates, Google's acquisition of DoubleClick was successfully completed in March 2008.

[21] Alex Kinnier, "Why We're Buying DoubleClick," *Google Official Blog*, June 26, 2007, http://googleblog.blogspot.com/2007/06/why-were-buying-doubleclick.html

[22] Wojcicki, "Making ads more interesting."

profiling capabilities to Google services and gave it control of an extensive ad network.[23] In 2009, Google sold display advertising, including video, to 94 of *Advertising Age's* top 100 advertisers.[24]

This brief sketch of Google's appropriation of surveillance-based advertising highlights a trajectory that is generalizable across the industry. By the end of the 2000s, the five most powerful internet advertising companies – Google, Yahoo, Microsoft, AOL, and the social networking site Facebook – each served profile-based targeted advertising and/or collected consumer data across expansive networks that included their own properties and millions of other sites. Each also offered variations of consumer data exchanges enabling the real-time buying and selling of access to individuals, a process dependent upon sophisticated exchange of data among many market constituents. After a brief stalling out in the wake of the dotcom crash, the surveillance infrastructure model developed during that period and many of the major companies that pioneered it were quickly integrated into the central powers of online advertising.

Beyond the creation of any specific technology or company, the framework established in the late 1990s has not only endured, but has dramatically expanded. Online retailers such as Amazon have now begun to exploit their stockpiles of consumer data for advertising purposes.[25] New forms of surveillance-based advertising such as "deep packet inspection" have evolved on the internet and are being applied to other media from mobile platforms to cable television.[26] Barack Obama's presidential campaigns set milestones regarding the deployment of data collection and analysis for electioneering, reportedly expanding the Democratic Party's voter

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[23] Google, *2009 Annual Report* ["Founders Letter"], 6.
[24] Google, *2009 Annual Report* ["Founders Letter"], 6.
[25] Jessica Leber, "Amazon Woos Advertisers with What It Knows about Consumers," *MIT Technology Review*, January 21, 2013, http://www.technologyreview.com/news/509471/amazon-woos-advertisers-with-what-it-knows-about-consumers/
[26] Tom Simonite, "AT&T Brings Online Ad Targeting Tactics to TV Commercials," *MIT Technology Review*, February 5, 2013, http://www.technologyreview.com/news/510186/att-brings-online-ad-targeting-tactics-to-tv-commercials/

data by a factor of ten in the last two months of the 2008 campaign alone.[27] In 2013 the data storage market is worth an estimated $70 billion.[28] Companies such as Switch maintain facilities the size of seven football fields that house row upon row of clustered networked data storage units and servers, each of which is capable of cataloging the digital equivalent of "the entire written works of man, from the dawn of time until today, in every single language."[29]

With some one billion users worldwide variously uploading streams of personal information, Facebook is perhaps one of the best-positioned companies to take the lead in surveillance-based advertising. In what may induce déjà vu for readers of this dissertation, Facebook partnered with the marketing information firm Datalogix in 2012 to integrate records of past offline purchasing behavior into its profile-based ad targeting processes. After finding that "fewer than one percent of in-store sales could be tied to brand advertising campaigns on Facebook," the company began to offer advertisers insights on the "ideal number of ad impressions" to maximize the efficiency of particular campaigns geared to particular individuals.[30]

One could argue that Facebook's rehashing of techniques implemented by DoubleClick some 15 years prior signals the industry's ultimate weakness rather than its increasing vigor. But focusing on any given implementation, no matter how flawed, of a broader advertising system that is based a massive and increasingly integrated surveillance infrastructure misses the forest for the trees. Even if data collection and analysis perpetually fall short of marketers' expectations, the socio-technical foundations of consumer surveillance are cemented within the

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[27] Tim Murhpy, Inside the Obama Campaign's Hard Drive," *Mother Jones*, September/October 2012, http://www.motherjones.com/politics/2012/10/harper-reed-obama-campaign-microtargeting
[28] Stacey Vanek Smith, "Big data creates big industry for storing data," April 4, 2013, *Marketplace*, http://www.marketplace.org/topics/business/big-data-creates-big-industry-storing-data
[29] Vanek Smith, "Big data creates big industry for storing data."
[30] Rebecca Greenfield, "What Facebook Is Learning from Your Offline Purchasing Data," *The Atlantic Wire*, October 1, 2012, http://www.theatlanticwire.com/technology/2012/10/what-facebook-learning-your-offline-purchasing-data/57463/

prevailing system of capitalist development. Even if current ad targeting systems produce hopelessly irrelevant appeals in the short term, the apparatus of data collection continues to expand, largely hidden from view.

This arrangement bears significant social costs. Cultural production in a commercial media system is inescapably filtered through the demands of marketers, while consumer surveillance opens the floodgates to the reproduction of social discrimination in new contexts and the enactment and institutionalization of new forms of prejudice based on intersectional difference. Established liberal democratic norms regarding privacy are derided as outmoded and the promotion of unsustainable consumption contributes to deepening crises within our material and mental environments.[31] Before the first advertisement appeared on the web, Sut Jhally developed a critique of the social effects of an advertising system that appeals to people as atomized individuals, manufacturing individualized problems and then purporting to solve them through individualized material consumption.[32] Jhally reasoned that advertising is therefore unable to provide a cultural lexicon in which broad social problems, the kind that must be negotiated collectively, can be meaningfully addressed. The negative effects of this scenario are compounded as advertising permeates an ever-greater proportion of culture, squeezing out alternative frameworks, while social problems that demand collective solutions intensify. The force of this argument is amplified by the logic of surveillance-based marketing, which aims to engage all consumers in the most individualized way possible, even if that means denying them services and opportunities.

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[31] Robert W. McChesney, John Bellamy Foster, Inger L. Stole, and Hannah Holleman, "The Sales Effort and Monopoly Capital," *Monthly Review*, 60, no. 11 (2009), 17.

[32] Sut Jhally, "Commercial Culture, Collective Values, and the Future," *Texas Law Review*, *71,* no. 4 (1993), 805-14; Sut Jhally, Advertising at the Edge of the Apocalypse," in Robin Andersen and Lance Strate, eds., *Critical Studies in Media Communication* (Oxford: Oxford University Press, 2000), 27-39.

Imperfect as it may be, now that the surveillance infrastructure is in place it will not be easily disassembled. Joseph Turow argues that the present system has calcified to the extent that any significant reversal of course is all but impossible.[33] I would surmise that this is likely the case if such a reversal was pursued only via "normal" channels of social change such as government appeal or consumer-based activism. Capitalist infrastructural inertia is well underway as surveillance-based marketing becomes normalized throughout the economy.[34] Any meaningful intervention requires popular and sustained political action in conjunction with, and building upon, directed consumer activism and government petition. For that to occur, the links between surveillance infrastructure and capitalism's deepening contradictions must be drawn out in more detail and made accessible to as many people as possible. While this has not been the primary task of this research, it is certainly a worthy extension of its project.

Ultimately, the point of critical analysis is not to theorize the domination engendered by capitalism, but to clarify its dynamism in order to support and work toward forms of intervention. Revisiting the degree of autonomy we presume to give the marketing complex and capital at large is an important step toward political mobilization. Critical media scholarship shows that commercial media systems are by no means preordained. As Stuart Ewen demonstrated in his classic account of the birth of modern consumer culture, mass consumerism "emerged in the 1920s not as a smooth progression from earlier and 'less developed' patterns of consumption, but rather as an aggressive device of corporate survival" in the face of labor unrest and industrial overproduction.[35]

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[33] Joseph Turow, *The Daily You: How the New Advertising Industry Is Defining Your Identity and Your Worth.* (New Haven: Yale University Press, 2011).
[34] Turow, *The Daily You.*
[35] Stuart Ewen, *Captains of Consciousness: The Politics of Style in Contemporary America* (New York: Basic Books, 1988), 54.

Likewise, this research has argued that surveillance-based advertising was not constructed as some masterstroke of the irrepressible marketing complex. Facing a crisis of control over emerging interactive media, corporate actors swiftly and unevenly mobilized to integrate the nascent web medium into the commercial media system, transforming the character of both. These developments occurred through the contested actions of individuals who were empowered by corporate institutions, financial markets, and systems of government. As such, specific outcomes were not inevitable. There was no certainty among the advertising and media industries that all would work out to their advantage. In the words of one marketing executive, the move towards consumer surveillance was "less about competitive advantage and more about survival."[36] This highlights the coercive force of an economic system based on perpetual expansion, while simultaneously denaturalizing its progress.

[36] Stacey Lynn Schulman, "Hyperlinks and marketing insight," in *The Hyperlinked Society*, ed. Joseph Turow and Lokman Tsui (Ann Arbor: University of Michigan Press, 2008), 145.

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